DOCUMENT RESUME

ED 241 336 SE 044 133

AUTHOR McCoy, Gloria B.
TITLE Special Education Developmental Mathematics. Grades 6, 7, and 8.
INSTITUTION Houston Independent School District, Tex.
PUB DATE 82
NOTE 231p.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC10 Plus Postage.
DESCRIPTORS Arithmetic; Behavioral Objectives; Curriculum Guides; Fractions; Geometry; Grade 6; Junior High Schools; Learning Activities; Mathematical Applications; *Mathematics Curriculum; *Mathematics Materials; Measurement; Number Concepts; Resource Materials; *Sequential Approach; *Special Education; Time; Units of Study
IDENTIFIERS Money; PF Project

ABSTRACT

This curriculum guide is presented in a sequential and repetitive format so that the student may master one objective before proceeding to the next. It is designed to allow the teacher to be creative in meeting the needs of special populations. Each unit contains five parts: (1) instructional subarea; (2) instructional objectives; (3) performance objectives; (4) activities; and (5) materials/resources. Each unit contains one instructional subarea which is divided into two or more instructional objectives. Each instructional objective is divided into performance objectives. Activities and materials/resources are listed for each performance objective. The activities are designed so that they may reinforce the performance objectives independently of the materials/resources. The units for grade 6 are: numeration, basic operations, money, time, geometry, measurement, fractions, division, and practical applications. The grade 7 units are: numeration, basic operations, time, geometry/measurement, fractions, and practical applications. The units for grade 8 are: basic operations, money, geometry/measurement, fractions, decimals, and practical applications. A list of textbooks used at each grade level, a list of supplemental resources, a scope and sequence of objectives for each grade level, and a 17-item bibliography of mathematics books are included. (DC)

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SPECIAL EDUCATION

DEVELOPMENTAL MATHEMATICS

GRADES 6,7,8

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HOUSTON INDEPENDENT SCHOOL DISTRICT
HOUSTON, TEXAS
CURRICULUM BULLETIN 82CBM45
ITEM NUMBER 33.3832

SPECIAL EDUCATION

DEVELOPMENTAL MATHEMATICS

GRADES 6, 7, and 8

PREPARED BY

GLORIA B. McCOY

SPECIAL EDUCATION COUNSELOR

AREA VI

PUBLISHED BY

HOUSTON INDEPENDENT SCHOOL DISTRICT

HOUSTON, TEXAS

1982

PUBLISHED UNDER THE DIRECTION OF

MRS. ROSE HICKS, DEPUTY SUPERINTENDENT FOR SPECIAL POPULATIONS
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PHILOSOPHY

The primary goal of education in our complex society is to assist all students in maximizing their potential to the fullest extent possible. This attempt is made by considering individual abilities and differences, but without placing stigmatizing restrictions based solely upon deficits, on the student.

The content of this curriculum guide is focused on the student's understanding and usage of the language of mathematics in such a manner that he/she is able to logically and effectively use the concept of quantity in daily activities. The material is presented in a sequential and repetitive format that affords the student an opportunity for mastery of one objective before proceeding to subsequent objectives. The guide also allows the user to be creative in planning to meet the needs of a special population.

PREFACE

Each teaching unit in the curriculum guide is divided into five sections. These are the: (1) instructional sub-area, (2) instructional objective, (3) performance objective, (4) activities, and (5) materials/resources.

The instructional objectives that are essential learner outcomes are indicated by an asterisk (*). The activities section is designed so that it may be used to reinforce the performance objectives independent of the materials/resources section.

Each grade level uses two core texts and various supplemental resources. The core texts for each grade level are as follows:

° Grade 6 - Working With Numbers, The New Triangle Book (Steck-Vaughn Company, Austin, Texas).

- Working With Numbers, Rectangle Book, Revised (Steck-Vaughn Company, Austin, Texas).

° Grade 7 - Succeeding in Mathematics, Revised (SIM), Green (Steck-Vaughn Company, Austin, Texas).

- Succeeding in Mathematics, Revised (SIM), Pink (Steck-Vaughn Company, Austin, Texas).

° Grade 8 - Succeeding in Mathematics (SIM), Yellow (Steck-Vaughn Company, Austin, Texas).

- Succeeding in Mathematics, Revised (SIM), Purple (Steck-Vaughn Company, Austin, Texas).

The supplemental resources are:

° Primary Numbers and Geometry Board
° Kinesthetic Shapes Discovery Board
° Money Bingo
° Money Dominoes
° DLM Moving Up in Money #428
° DLM Buy and Sell #414
° DLM Moving Up in Time #344
° Computapes, Modules 1-6
° Individualized Mathematics BB and CC
° Arithmetic Step by Step, Kit B
° Level Three Math
° Fraction Game
° Fraction Mastery Program (language master cards)
° A General Mathematics Review #513
° Work With Numbers

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SPECIAL EDUCATION DEVELOPMENTAL MATHEMATICS
GRADE 6
SCOPE AND SEQUENCE

First Semester - 6A

I. Numeration - The student will:

*A. Read and write three-digit numerals.

1. Read numerals orally when presented number cards at random.
2. Arrange number cards in order.
3. Write numerals when dictated at random.
4. Convert a three-digit number in expanded form to the compact form.
5. Analyze a given number by its designated place value.
6. Match the number with its word name.
7. Name the number which comes between two numbers which differ by two.
8. Count by 10's, 5's, and 2's to 100.

B. Identify the ordinal position of up to 20 objects.

1. Name the object in each ordinal position.
2. Identify the object in a specified ordinal position.
3. Arrange 20 objects based on their specified ordinal position.

II. Basic Operations - The student will:

*A. Add three-digit numbers with regrouping.

1. Write the sums of 50 distinct pairs of digits (0-9).
2. Add two three-digit numbers without regrouping.
3. Add two three-digit numbers with regrouping.
4. Add three-digit numbers involving money with regrouping.

B. Subtract three-digit numbers from three-digit numbers with regrouping.

1. Find the difference between 25 distinct pairs of digits (0-9).

2. Subtract two-three-digit numbers without regrouping.

3. Subtract two three-digit numbers involving money with regrouping.

C. Find the product of one-digit factors times three-digit factors with regrouping.

1. Determine the product of two single-digit factors.

2. Find the product of one-digit factors times two-digit factors without regrouping.

3. Find the product of one-digit factors times two-digit factors with regrouping.

4. Find the products of a one-digit factor times three-digit factors with regrouping.

5. Find the product of one-digit factors times two-digit factors involving money.

III. Money - the student will:

*A. Select coin combinations whose value equals a dollar.

1. Place coins in sequence based on value.

2. Match equivalent sets of coins (value to one dollar).

3. Complete a set of coins for a given value given a partial set.

4. Select coins which equal a given value to one dollar.

5. Select the appropriate coins to purchase a specific item.

B. Select currency combinations which equal fifty dollars ($50).

1. Identify five, ten, twenty, and fifty dollar bills.

2. Match equivalent values of currency.

3. Complete a set of currency for a given value given a partial set.

4. Select currency which equals a given value.

5. Select the appropriate currency to purchase a specific item.

IV. Time - The student will:

A. Complete a calendar.

1. Write the days of the week.

2. Write the months of a year.

3. Create a calendar for a specific month.

*B. Tell time to the nearest five minutes.

1. Read and write time to the half-hour.

2. Read and write time to the quarter-hour.

3. Read and write time to the nearest five minutes.

C. Use A.M. and P.M. to denote time of day.

1. Define A.M. and P.M.

2. Indicate A.M. or P.M. when given specific events and times.

Second Semester - 6B

V. Geometry - The student will:

*A. Draw a circle, triangle, square, rectangle, diamond, oval, and star.

1. Name shape when given a visual cue.

2. Draw a shape when provided a model.

3. Draw a shape when dictated.

4. Draw a specific design using all seven shapes from oral directions.

B. Determine the perimeter of a square, rectangle, or triangle.

1. Find the perimeter of a square, rectangle, and triangle given the lengths of the sides.

2. Find the perimeter of a square, rectangle, or triangle measuring the length of the sides.

3. Find the perimeter of objects found in the classroom (e.g., desk, etc.).

C. Determine rectangles and/or squares of equivalent areas by counting squares which cover the interior.

1. Find the area of a square by counting squares which cover the interior.

2. Match rectangles and/or squares with equivalents in area.

D. Use a picture and bar graph.

1. Identify the number of objects in a category using a picture graph.

2. Solve word problems using a picture graph.

3. Identify the number of units in a category using a bar graph.

4. Create a bar graph with a minimum of three categories.

5. Solve word problems using a bar graph.

VI. Measurement - The student will:

*A. Measure an object to the nearest quarter-inch and centimeter.

1. Identify a quarter-inch on a ruler.

2. Identify a centimeter on a ruler.

3. Measure an object less than 12 inches to the nearest quarter-inch.

4. Measure an object to the nearest centimeter.

5. Draw a line a specific number of centimeters long.

B. Apply standard units of measure.

1. Measure his/her height to the nearest inch.

2. Read a thermometer in either Fahrenheit or Celsius degrees.

3. Will change number of:

a) feet to an equivalent number of inches.

b) inches to an equivalent number of feet.

c) feet to an equivalent number of yards.

d) yards to an equivalent number of feet.

e) meters to an equivalent number of centimeters.

f) centimeters to an equivalent number of meters.

g) pounds to an equivalent number of ounces.

h) ounces to an equivalent number of pounds.

i) quarts to an equivalent number of pints.

j) pints to an equivalent number of quarts.

k) gallons to an equivalent number of quarts.

l) quarts to an equivalent number of gallons.

m) pints to an equivalent number of cups.

n) cups to an quivalent number of pints.

VII. Fractions - The student will:

*A. Identify fractional parts of a whole.

1. Divide a whole into halves, thirds, fourths, and fifths.

2. Indicate the shaded fractional part of a whole.

B. Compare fractional parts.

1. Identify the larger/smaller of two fractions with like denominators (2, 3, 4, or 5).

2. Match equivalent fractions.

3. Identify the larger/smaller of two fractions with different denominators (2, 3, 4, or 5).

VIII. Division - The student will:

*A. Divide three-digit numbers by one-digit divisors without remainders.

1. Write the quotient of 25 division facts.

2. Divide two-digit numbers by one-digit divisors without regrouping.

3. Divide a three-digit number by a one-digit divisor without regrouping.

B. Divide three-digit numbers by one-digit divisors with remainder.

1. Divide one-digit numbers by one-digit divisors with remainders.

2. Divide two-digit numbers by one-digit divisors with remainders.

3. Divide three-digit numbers by one-digit divisors with remainders.

IX. Practical Application - The student will:

*A. Solve word problems involving two operations requiring addition, subtraction, or multiplication.

1. Solve word problems involving one operation.

2. Solve word problems involving two steps using the same operation.

3. Solve word problems involving two different operations.

B. Solve word problems involving measurement, time, and money concepts.

1. Solve word problems involving units of measure.

2. Solve word problems involving operations with money.

3. Solve word problems involving units of time.

SPECIAL EDUCATION DEVELOPMENTAL MATHEMATICS
GRADE 7
SCOPE AND SEQUENCE

First Semester - 7A

I. Numeration - The student will:

*A. Read and write four-digit numerals.

1. Read numerals orally when presented number cards at random.
2. Write numerals when dictated at random.
3. Arrange number cards in order.
4. Convert a four-digit number in expanded to the compact form.
5. Analyze a given number by its designated place value.
6. Match the number with its word name.
7. Name the number which comes before and after a given number.

B. Recognize and use Roman numerals (values to 50).

1. Match the equivalent Arabic numerals and Roman numerals.
2. Place Roman numerals in sequence.
3. Convert Arabic numerals to Roman numerals and Roman numerals to Arabic numerals.

II. Basic Operations - The student will:

A. Add four-digit numbers with regrouping.

1. Add four-digit numbers without regrouping.
2. Add four-digit numbers with regrouping.
3. Add four-digit numbers involving money with regrouping.

*B. Subtract four-digit numbers from four-digit numbers with regrouping.

1. Subtract four-digit numbers without regrouping.
2. Subtract four-digit numbers with regrouping.
3. Subtract four-digit numbers involving money with regrouping.

C. Multiply two two-digit numbers with regrouping.

1. Multiply two two-digit numbers without regrouping.

2. Multiply two-digit numbers by one-digit numbers with regrouping.

3. Multiply two two-digit numbers with regrouping.

4. Multiply two-digit numbers involving money.

D. Divide four-digit numbers by two-digit divisors without remainder.

1. Write the quotient of 40 division facts.

2. Divide four-digit numbers by two-digit divisors without remainder.

3. Divide four-digit numbers by two-digit divisors with remainder.

III. Time - The student will:

A. Tell time to the nearest minute.

1. Read and write time to the quarter-hour.

2. Read and write time to the nearest five minutes.

3. Read and write time to the minute.

*B. Apply time concepts to daily activities.

1. Develop a schedule.

2. Determine the time difference between events.

3. Plan the amount of time needed to complete a task.

Second Semester - 7B

IV. Geometry/Measurement - The student will:

*A. Find the area of a square, rectangle, and triangle.

1. Find the area of a square and rectangle by counting squares which cover the interior.

2. Determine the ara of a rectangle, square, and triangle given the lengths of the sides.

3. Determine the area of a triangle, rectangle, and square measuring the lengths of the sides.

B. Apply standard units of measure.

1. Change the number of (review):

a) feet to an equivalent number of inches.

b) inches to an equivalent number of feet.

c) feet to an equivalent number of yards.

d) yards to an equivalent number of feet.

e) meters to an equivalent number of centimeters.

f) centimeters to an quivalent number of meters.

g) pounds to an equivalent number of ounces.

h) ounces to an equivalent number of pounds.

i) quarts to an equivalent number of pints.

j) pints to an equivalent number of quarts.

k) gallons to an equivalent number of quarts.

l) quarts to an equivalent number of gallons.

m) pints to an equivalent number of cups.

n) cups to an quivalent number of pints.

2. Change a number of:

a) ounces to an equivalent number of pounds.

b) pounds to an equivalent number of ounces.

c) pounds to an equivalent number of tons.

d) tons to an equivalent number of pounds.

e) feet to an equivalent number of miles.

f) kilometers to an equivalent number of meters.

g) meters to an equivalent number of kilometers.

h) teaspoons to tablespoons.

i) tablespoons to teaspoons.

3. Measure his/her weight in pounds.

C. Obtain information from picture graphs, line graphs, and bar graphs.

1. Identify the number of objects in a category using picture, line and bar graphs.

2. Solve word problems using graphs.

3. Create line and bar graphs using a minimum of five categories.

V. Fractions - The student will:

*A. Add and subtract fractions with like denominations.

1. Specify the numerator and denominator of a fraction.

2. Arrange fractions in sequence from smaller to larger.

3. Add fractions with like denominators.

4. Subtract fractions with like denominators.

B. Add and subtract fractions with different denominators.

1. Determine the least common denominator of two or more fractions.

2. Add fractions with different denominators.

3. Subtract fractions with different denominators.

VI. Practical Applications

*A. Solve word problems involving two operations requiring addition, subtraction, multiplication, or division.

1. Solve word problems involving two steps using the same operation.

2. Solve word problems involving two different operations.

B. Solve word problems involving measurement, time, and money concepts.

1. Solve word problems involving units of measure.

2. Solve word problems involving operations with money.

3. Solve word problems involving units of time.

SPECIAL EDUCATION DEVELOPMENTAL MATHEMATICS
GRADE 8
SCOPE AND SEQUENCE

First Semester - 8A

I. Basic Operations - The student will:

A. Add five-digit numbers with regrouping.

1. Add two five-digit numbers with regrouping.

2. Add four five-digit numbers with regrouping.

3. Add five-digit numbers involving money notation with regrouping.

B. Subtract five-digit numbers with regrouping.

1. Subtract five-digit numbers without regrouping.

2. Subtract five-digit numbers with regrouping.

3. Subtract five-digit numbers involving money notation with regrouping.

*C. Multiply two two-digit numbers with regrouping.

1. Multiply two two-digit numbers without regrouping.

2. Multiply two-digit numbers by one-digit numbers with regrouping.

3. Multiply two two-digit numbers with regrouping.

4. Multiply two-digit numbers involving money.

D. Divide four-digit numbers by two-digit divisors without remainders.

1. Write the quotient of 40 division facts.

2. Divide four-digit numbers by two-digit divisors without remainders.

3. Divide four-digit numbers by two-digit divisors with remainders.

II. Money - The student will:

A. Select coin combinations whose value equals a dollar.

1. Match equivalent sets of coints (value to one dollar).

2. Complete a set of coins for a given value given a partial set.

3. Select coins which equal a given value to one dollar.

4. Select the appropriate coins to purchase a specific item.

5. Determine the correct coins for use for different types of coin operated machines.

B. Select currency combinations which equal one hundred dollars ($100).

1. Identify five, ten, twenty, and fifty dollar bills.

2. Match equivalent values of currency.

3. Complete a set of currency for a given value given a partial set.

4. Select currency which equals a given value.

*C. Select the appropriate amount of money to purchase a specific item.

1. Determine the change from ten dollars ($10) when purchasing a specific item whose value is less than ten dollars ($10).

2. Determine the postal service charges on mailing letters, mailing a given size package, and on a money order.

3. Compare the cost of transportation to a given location via a cab and a bus.

4. Determine the cost of a meal in a restaurant given a specific menu.

III. Geometry/Measurement - The student will:

A. Identify the given properties of line segments.

1. Define a straight line segment.

2. Designate curved, horizontal, vertical, parallel, and perpendicular line segments.

B. Identify and draw angles.

1. Define and draw a ray.

2. Define and draw an angle.

3. Define and identify a right angle.

*C. Determine the temperature using Fahrenheit and Celsius thermometers.

1. Designate the freezing and boiling points on a Fahrenheit and Celsius thermometer.

2. Read the temperatures on different types of thermometers used in various situations (e.g., room temperature, cooking).

D. Obtain information from picture graphs, line graphs, circle graphs, and bar graphs.

1. Identify the number of objects in a category using picture, line, and bar graphs.

2. Solve word problems using graphs.

3. Create line, circle, and bar graphs using a minimum of five categories.

Second Semester - 8B

IV. Fractions - The student will:

*A. Add and subtract fractions with different denominators.

1. Determine the least common denominator of two or more fractions.

2. Add fractions with different denominators.

3. Subtract fractions with different denominators.

B. Add and subtract mixed numbers.

1. Designate proper and improper fractions.

2. Convert improper fractions to mixed numbers.

3. Convert mixed numbers to improper fractions.

4. Add and subtract mixed numbers with like denominators.

5. Add and subtract mixed numbers with different denominators.

C. Multiply fractions.

1. Multiply a fraction by a fraction.

2. Multiply a whole number by a fraction.

3. Multiply a whole number by a mixed number.

4. Multiply a mixed number by a fraction.

5. Multiply a mixed number by a mixed number.

D. Divide fractions.

1. Identify the reciprocal of a number.

2. Divide a fraction by a whole number.

3. Divide a whole number by a fraction.

4. Divide a fraction by a fraction.

V. Decimals - the student will:

*A. Add decimals.

1. Identify decimal numerals to the thousandths place.

2. Add decimal numbers having the same number of decimal places.

3. Add decimal numbers with a different number of decimal places.

B. Subtract decimals.

1. Subtract decimal numbers having the same number of decimal places.

2. Subtract decimal numbers with a different number of decimal places.

C. Multiply decimals

1. Multiply a decimal by a whole number.

2. Multiply two decimals.

D. Divide decimals.

1. Divide a decimal by a whole number.

2. Divide a decimal by a decimal.

VI. Practical Applications

*A. Solve word problems involving two operations requiring addition, subtraction, multiplication, or division.

1. Solve word problems involving two steps using the same operation.

2. Solve word problems involving two different operations.

B. Solve word problems involving measurement, time, and money concepts.

1. Solve word problems involving units of measure.

2. Solve word problems involving operations with money including budgeting.

3. Solve word problems involving units of time including scheduling.

TEACHING UNITS

GRADE 6

FIRST SEMESTER

INSTRUCTIONAL SUB AREA: I. Numeration

INSTRUCTIONAL OBJECTIVE: *A. The student will read and write three-digit numerals.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Read numerals orally when presented number cards at random with 90% accuracy.	The student will: 1a. Read numbers orally when presented number cards containing odd numbers. 1b. Read numbers orally when presented number cards containing even numbers. 1c. Select a number card from a set of thirty placed face down and read the number. 1d. Construct number cards using numbers found in magazines and/or newspapers and exchange the cards with classmates for oral recitation.	Teacher- or student-made number cards Newspapers Magazines
2. Arrange number cards in order with 90% accuracy.	2a. Arrange in numerical sequence a set of ten shuffled number cards placed face down containing any ten sequential numbers. 2b. Play "Beat the Clock" by arranging 15 non-sequential number cards placed face up in order within 30 seconds. 2c. With a group of three players, select a number card from the hand of another student who is holding seven number cards and place the card in the center of the table. A peer will select a card from the first player and place it in next to the first card. The students	Teacher- or student-made number cards

Performance Objectives	Activities	Materials/Resources
	will continue selecting cards and placing them in order until one student makes an error.	
3. Write numbers when dictated at random with 90% accuracy.	3a. Write ten numerals using pre-recorded language master cards that the student has made. 3b. Write 20 numerals dictated by the teacher or student.	3a. Language master cards
4. Convert a three-digit number in expanded form to the compact form with 90% accuracy.	4a. Match a list of numbers in expanded form with a list in compact form. 4b. Write the missing digit of a number in compact form, given that number in expanded form. e.g.: 1) 700 + 30 + 5 = 73__ 2) 100 + 10 + 1 = 1__1 4c. Using the chalkboard, write the compact form as a peer dictates the expanded form. 4d. Using the three-digit addresses of students within the class written in expanded form, write the compact form.	4a. Working With Numbers (New Triangle Book), pp. 7-10 Develop Number Skills, p. 40
5. Analyze a given number by its designated place value with 100% accuracy.	5a. Using various brands of soft drink bottle tops as place value indicators, place the correct top under the appropriate numeral. 5b. Using a chart of numbers and place values, place an X in the column that indicates the correct place value of the circled numeral.	5a. Soft drink bottle tops

Performance Objectives	Activities	Materials/Resources
	e.g.: 5c. Randomly select three numerals from a box, read the number orally, write the number on the board, and say the place value for each numeral.	5c. Teacher- or student-made number cards Arithmetic Step-By-Step, Kit B, Unit II, Level III Working With Numbers, (New Triangle Book), pp. 1-6
6. Match a number with its word name with 90% accuracy.	6a. Using a list of five numbers in one column and the word name in the second column, match the number with the correct word by drawing a line between the two. 6b. Using tape-backed number cards, match the number cards with the word name written on laminated cardboard. 6c. Match the word name with the number using rubber bands with tacks and a number board. e.g. Two hundred and two — 115 Six hundred and one — 601 One hundred and fifteen — 202	6a. Arithmetic Step-By-Step, Kit B, Unit I, Level II 6b. Tape-backed number cards, laminated cardboard Working With Numbers (New Triangle Book), p. 9

100's	10's	1's
7(9)5	X	
12(1)		X
(3)52	X	

Performance Objectives	Activities	Materials/Resources
	6d. Write the appropriate number when given a list of ten word names. 6e. Write the appropriate word name when given a list of ten numbers.	
7. Name the number which comes between two numbers that differ by two with 100% accuracy.	7a. Write the missing number in the blank given a series of numbers that differ by two. e.g., a) 553, _____, 555 b) 600, _____, 602 7b. Given pairs of numbers that differ by two, say the number that comes between the two numbers.	7a. Arithmetic Step by Step, Kit B, Unit I, Level I Working With Numbers, pp. 104-106
8. Count by 10's, 5's, and 2's to 100 with 90% accuracy.	8a. Using three number charts with numbers from 1-100 placed sequentially in each square, circle the 10's in red, the 5's in blue, and the 2's in yellow. 8b. Using three number charts with numbers from 1-100 placed in non-sequential order in each square, circle the 10's in red, the 5's in blue, and the 2's in yellow.	8. Arithmetic Step by Step, Kit B, Unit I, Level III

INSTRUCTIONAL SUB AREA: I. Numeration

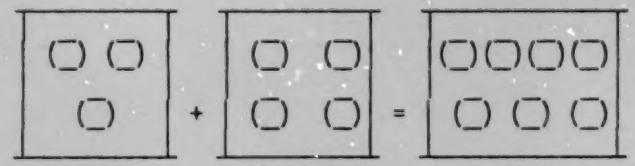
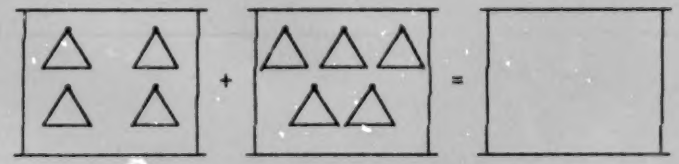
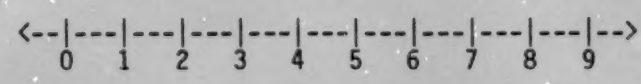
INSTRUCTIONAL OBJECTIVE: B. The student will identify the ordinal position of up to 20 objects.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Name the object in each ordinal position with 75% accuracy.	The student will: 1a. Repeat after the teacher the ordinal position of 20 number cards placed in order containing the numbers from 1-20. 1b. Point to number cards from 1-20 placed in order and say the ordinal number for each card. 1c. Say the ordinal position of 20 chairs in the room. 1d. Read his/her schedule orally giving the proper ordinal number for each period. 1e. With a partner giving the cardinal number of 20 items in order, say the corresponding ordinal number.	1a. Number cards Arithmetic Step by Step, Kit B, Unit I, Level II
2. Identify the object in a specified ordinal position with 75% accuracy.	2a. Using pictures of animals numbered from 1 to 20, say the name of the animal after teacher gives the ordinal number of the animal. 2b. After reading the cardinal number assigned to each student, identify the students by their ordinal number.	Arithmetic Step by Step, Kit B, Unit I, Level II

Performance Objectives	Activities	Materials/Resources
3. Arrange 20 objects based on their specified ordinal position with 75% accuracy.	3a. After writing the numbers from 1 to 20 on 3x5-inch cards and placing them in a box, select a card saying its ordinal name, and place it in order on the table. When all of the cards have been selected, read each card in order giving its ordinal name.	3a. 3x5-inch cards
	3b. Arrange a cut-up comic strip in order.	3b. Comic strip
	3c. Using pictures of students preparing for school, arrange the pictures in order, say the ordinal position of the picture, and explain what is happening in the picture.	3c. Snapshots of students Arithmetic Step by Step, Kit B, Unit I, Level II

INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: *A. The student will add three-digit numbers with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Write the sums of 50 distinct pairs of digits (0-9) with 100% accuracy.	The student will: 1a. Using pictures of objects, write the addend and the sum. e.g.  3 + 4 = ? 1b. Using pictures of objects, write the addend, draw the sum of the objects, and write the sum. e.g.  4 + 5 = ? 1c. Find the sum of the numbers, using a number line. e.g.  4 + 4 = ?	1M BB, Blocks 1, 3, 5, Working With Numbers (New Triangle Book), pp. 11-12 Computapes, Module 1, AS 1, 2

Performance Objectives	Activities	Materials/Resources
2. Add two three-digit numbers without regrouping with 90% accuracy.	2a. Complete the chart by placing each numeral in the correct place value column. e.g. (1) 953 = 9 ? 3 (2) 839 = ? 3 ? (3) 411 = ? ? ? (100's, 10's, 1's) 2b. Using an alphabet chart to indicate the place value column to be added first, second and third, supply the missing sum indicated by the letter. e.g. C B A 4 3 1 + 2 0 3 C = ___ B = ___ A = ___ 2c. Write the sums to three-digit numbers dictated by the teacher.	2a. Computapes, Module 2, AS 26 1M BB, Blocks 1, 3, 5 Working With Numbers (New Triangle Book), p. 14
3. Add two three-digit numbers with regrouping with 85% accuracy.	3a. After having prepared a transparency that illustrates regrouping, explain the places to the class using an overhead projector. 3b. Using a counting frame, illustrate the concept of regrouping.	3a. Overhead projector and transparencies 3b. Counting frame 1M BB, Blocks 1, 3, 5 1M CC, Blocks 1, 3 Working With Numbers, New Triangle Book), pp. 18-28

Performance Objectives	Activities	Materials/Resources
	3c. Using an addition problem in expanded form, write the correct number or word in the square. e.g. (1) [1 ?] 5 hundreds + 4 tens + 3 ones + 3 hundreds + 3 tens + 8 ones 1 ones (2) [? hundreds] 1 tens 6 hundreds + 8 tens + 3 ones + 2 hundreds + 2 tens + 9 ones + 1 tens + 2 ones 3d. Add numbers recorded on a language master card.	
4. Add three-digit numbers involving money with regrouping with 100% accuracy.	4a. Write the cost of two items using a fast food menu. 4b. Add the cost of three items found in the classroom that the teacher has labeled with price tags. 4c. Using items that he/she has brought from home and labeled with a price (empty bottles, boxes, cups), compute the sum of four items.	Working With Numbers (Rectangle Book), p. 9 Arithmetic Step by Step, Kit B, Unit VIII, Level III

INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: B. The student will subtract three-digit numbers from three-digit numbers with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Find the difference between 25 distinct pairs of digits (0-9) within five minutes with 80% accuracy.	The student will: 1a. Write the answers to 25 problems recorded on a language master. 1b. Say the answers to 25 problems recorded on a language master. 1c. Say the answers to problems written on paper fish with paper clips attached. 1d. Write the correct number after being shown a card in which a number is covered. e.g. (1) [8 - 1 =] (2) [8 - = 7]	Working With Numbers, (New Triangle Book), pp. 30-31 Computapes, Module 1, AS 13, 14 Working With Numbers, p. 16
2. Subtract two three-digit numbers without regrouping with 90% accuracy.	2a. Find the answer to the problem that is written on construction paper and match the answer to the correct problem which is written on construction paper of a different color. e.g. 582 − 361 182 221 141 348 − 207 697 − 515	Working With Numbers, (New Triangle Book), p. 32 Computapes, Module 1, AS 20 Computapes, Module 2, AS 35 IM BB, Blocks 2, 5

Performance Objectives	Activities	Materials/Resources
	2b. Write the missing number(s) in the problems such as: e.g. (1) 978 − 8?6 = 152 (2) ?53 − 54? = 410	
3. Subtract two three-digit numbers with regrouping with 85% accuracy.	3a. Use an abacus to solve problems. 3b. Solve problems using symbols to represent numbers. e.g. 0 1 2 3 4 5 6 7 8 9 Δ L Z $ X ▽ + ● # ▭ X ▭ L − Z ● ▽	3a. Abacus Working With Numbers (New Triangle Book), pp. 35-54
4. Subtract two three-digit numbers involving money with regrouping with 90% accuracy.	4a. Using a given amount of money stated by the teacher, subtract the cost of items by a shopping list. 4b. Bring a cash register receipt from home, circle the three-digit numbers, and subtract the appropriate numbers.	Working With Numbers (New Triangle Book), p. 15 4b. Cash register receipts

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INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: C. The student will find the product of one-digit factors times three-digit factors with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Determine the product of two single-digit factors	The student will: 1a. Define multiplicand, multiplier, and product. 1b. Write the missing number in a multiplication table. 1c. Play "Clap, Clap, Snap, Snap" with a peer. e.g. Peer: clap, clap, snap, snap clap, clap, two x two Student: Clap, clap f-o-u-r 1d. Write the correct number in the column. e.g.	Working With Numbers (New Triangle Book), pp. 55-75 Computapes, Module 3, MD 3-8 1 M BB Blocks 7, 11 1 M CC Blocks 4, 5

	x 6
8	48
3	
9	
7	

1e. Complete the multiplication matrix by multiplying across and down.

e.g.

3	6	
9	4	

Performance Objectives	Activities	Materials/Resources
2. Find the product of one-digit factors times two-digit factors without regrouping with 95% accuracy.	2a. Write the missing number in the square. e.g. (1) 24 x 2 = □8 (2) □1 x 3 = 93 2b. Write on the board answers to problems dictated by the teacher. 2c. Given a product, write the numbers that when multiplied together will equal that product.	Working With Numbers (New Triangle Book), pp. 76-78
3. Find the product of one-digit factors times two-digit factors with regrouping with 85% accuracy.	3a. Write the product after selecting one number from each box labeled multiplicand and multiplier. 3b. When shown ten problems that have been solved, circle the ones that required regrouping. 3c. When shown problems that have been solved, respond orally to questions concerning how the circled portion of the product was derived. e.g. 53 x 4 = (21)2 Teacher: Since we already know that 4 x 5 = 20, why is 21 written here instead of 20?	Working With Numbers (New Triangle Book), pp. 79-84 Computapes, Module 4, MD 22 1 M BB Block 11 1 M CC Block 4
4. Find the product of a one-digit factor times three-digit factors with regrouping with 85% accuracy.	4a. Find the product by using cutout numbers of the same color for the factors and smaller cutout numbers for the number(s) to be regrouped, and arrange them on a table or on the floor. 4b. Use small manipulative objects such as beans to illustrate regrouping.	Computapes, Module 4, MD 2, 3 1 M BB, Block 11 1 M CC, Block 5

Performance Objectives	Activities	Materials/Resources
	4c. Play "Flip Flop" by finding the product and then reversing the three-digit number and finding the product of the new number. e.g. 638 x 3 836 x 3 4d. Give the teacher oral directions on regrouping as the teacher completes a problem on the board. The teacher does not write anything unless directed to do so by the student.	
5. Find the product of one-digit factors times two-digit factors involving money with 90% accuracy.	5a. Complete charts involving the purchase of specific items for the class. e.g. (1) Item | Pencils | Rulers Cost | 12¢ | 27¢ Number | 4 | 3 TOTAL | | (2) Item | Cost | Number | TOTAL Milk | 15¢ | 6 | Pens | 37¢ | 2 | 5b. Using items in the classroom that have been labeled with a price, calculate the products using a one-digit multiplier stated by a peer. 5c. Solve simple word problems.	Arithmetic Step by Step, Kit B, Unit VIII, Level III

INSTRUCTIONAL SUB AREA: III. Money

INSTRUCTIONAL OBJECTIVE: *A. The student will select coin combinations whose value equals a dollar.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Place coins in sequence based on value with 100% accuracy.	1a. Using pictures of coins or actual coins with the values written above the coins as a guide, match coins for one-to-one correspondence.	Arithmetic Step by Step, Kit B, Unit VIII, Level I
	1b. Using the values without the coins as a guide, match coins for one-to-one correspondence.	Working With Numbers, p. 42
	1c. Match the coins with the size of the coins drawn on paper.	
	1d. Orally designate two coins as either more than or less than and place in sequence.	
	1e. Orally designate coins as first through fifth, based upon value.	
	1f. Select coins at random and place them in ascending and descending order.	
2. Match equivalent sets of coins (value to one dollar) with 100% accuracy.	2a. Count to 5, 10, 25, 50, and 100 using pennies: group the coins, place a nickel above the five pennies, a dime above the ten pennies, etc.	DLM Moving Up in Money, #428

Performance Objectives	Activities	Materials/Resources
	2b. Count by 1's to 100 using pennies and place them on the money board. e.g. (Pennies) = $1.00 (Nickels) = $1.00 (Dimes) = $1.00 (Quarters) = $1.00 (Half-Dollars) = $1.00 Follow same procedure using 5's and 10's. 2c. Place nickels equaling $1.00 in four groups of five each, substitute a quarter for each group of nickels, and place the nickels on the money board. 2d. Place dimes equaling $1.00 in two groups of five each, substitute a half-dollar for each group of dimes, and place the half-dollars on the money board. 2e. Show one or two coins of the same value; say orally how many more coins of the same value would be needed to equal $1.00.	Money Dominoes
3. Complete a set of coins for a given value given a partial set with 95% accuracy.	3a. Draw pictures of the appropriate coins of the same value that equal given amounts. 3b. Draw pictures of the appropriate coins of different values that equal given amounts. 3c. As the teacher dictates an amount and gives the names of one or two coins to be used in finding out the amount, select from his/her box of "coins" the correct coin(s) to complete the amount.	Working With Numbers, pp. 46-47 Money Dominoes

Performance Objectives	Activities	Materials/Resources
	3d. Given an amount and pictures of coins with one or two coins circled, circle the appropriate coins needed to equal the given amount.	
4. Select coins which equal a given value to one dollar with 90% accuracy.	4a. Given a list of values, circle the pictures of coins that would equal the given value. 4b. Complete a chart by writing three combinations of how many pennies, nickels, dimes, quarters, and half-dollars are needed to equal the given value. e.g. 4c. Select a handful of coins from a bag and match them to the given amount.	Develop Number Skills, p. 57 DLM Moving Up in Money, # 428
5. Select the appropriate coins to purchase a specific item with 100% accuracy.	5a. Using the menu from the school cafeteria, select the coins and place in envelopes labeled Monday through Friday, the coins needed to purchase lunch. 5b. Think of some items that he/she would like to purchase that cost $1.00 or less, draw pictures of the items, write the cost beside each item, and paste the appropriate coins under the item.	DLM Buy and Sell, #414 Develop Number Skills, p. 59

	PENNIES	NICKELS	DIMES	QUARTERS	HALF-DOLLARS
82¢	2	1		3	

INSTRUCTIONAL SUB AREA: III. Money

INSTRUCTIONAL OBJECTIVE: B. The student will select currency combinations which equal fifty dollars ($50).

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify five, ten, twenty, and fifty dollar bills with 85% accuracy.	The student will: 1a. Place pictures of five, ten, twenty, and fifty dollar bills in sequence based upon value. 1b. Match pictures of five, ten, twenty, and fifty dollar bills with their given amounts listed on a chart. 1c. Color the picture of the appropriate bill after a peer dictates a value. 1d. Choose a picture of a five, ten, twenty, or fifty dollar bill at random and state its value.	Arithmetic Step by Step, Kit B, Unit VIII, Level I
2. Match equivalent values of currency with 85% accuracy.	2a. Reposition students who are labeled as five, ten, twenty, and fifty dollar bills to match a given value. 2b. Using chalkboard erasers labeled as five, ten, twenty, and fifty dollar bills placed on the floor, match like erasers to given values. 2c. Given an amount and a specific currency value, write the amount of that currency that is required to equal the given amount.	DLM Buy and Sell, #414 Arithmetic Step by Step, Kit B, Unit VIII, Level I

Performance Objectives	Activities	Materials/Resources
3. Complete a set of currency for a given value given a partial set with 90% accuracy.	3a. Given a value and an incomplete set of currency, color additional currency values to equal the given value. 3b. Choosing from envelopes containing paper five, ten, twenty, and fifty dollar bills to which velcro had been attached, complete a velcro-covered board containing a given value and partial set with the appropriate currency.	DLM Buy and Sell, #414 3b. Envelopes, velcro, tag board
4. Select currency which equals a given value with 85% accuracy.	4a. Circle four combinations of currency needed to equal a given value. 4b. Selecting the appropriate currency from currency that the student has made from index cards, equal a value stated by a peer. 4c. Write the number of each denomination of currency needed to equal a given value taped on a language master card.	Money Bingo DLM Buy and Sell, #414
5. Select the appropriate currency to purchase a specific item with 90% accuracy.	5a. Given $50.00 in paper currency, purchase as many items as possible from the class store. 5b. After bringing to class a grocery receipt with three amounts circled, exchange the receipt with a peer, and select the appropriate currency to equal the circled amounts. 5c. Using pictures of items taken from catalogs, select the appropriate currency needed to purchase the items.	DLM Moving Up in Money, #428 5b. Grocery receipt

INSTRUCTIONAL SUB AREA: IV. Time

INSTRUCTIONAL OBJECTIVE: A. The student will complete a calendar.

Performance Objectives	Activities	Materials/Resources
The student will:		
1. Write the days of the week with 80% accuracy.	1a. Underline the correct word after it is dictated by a peer. 1b. Make letters from tagboard or felt and spell the days of the week. 1c. Rearrange scrambled letters to spell the days of the week. 1d. Write the days of the week from dictation. 1e. Write the day that comes before and the day that comes after a day dictated by a peer.	Bender, Michael, Peter J. Valletutti, and Rosemary Bender, Teaching the Moderately and Severely Handicapped, Vol. III (Baltimore: University Park Press, 1976), pp. 202-203. Wedemeyer, Avaril and Joyce Cejke, Creative Ideas for Teaching Exceptional Children (Denver: Love Publishing Co., 1970), p. 108.
2. Write the months of a year with 80% accuracy.	2a. Write the months of the year in sequence, as dictated by the teacher. 2b. White the months of the year as teacher or peer dictates in random order.	Hester, Gene A. and Olga A. Dominquez, A Second Look at Math (Educational Progress, 1976), pp. 99-106. Bender, Michael, Peter J. Valletutti, and Rosemary Bender. Teaching the Moderately and Severely Handicapped, Vol. III (Baltimore: University

Performance Objectives	Activities	Materials/Resources
		Park Press, 1976), pp. 205-206.
3. Create a calendar for a specific month with 80% accuracy.	3a. Think of a theme for a particular month and design a calendar for the month using that theme. 3b. Working against an egg timer, rearrange the days and numbers to form a calendar of a specific month. 3c. Cut out letters and numbers from magazines and newspapers and use to make a calendar for his/her birthday month. 3d. Create a calendar using the baby pictures of schoolmates and ask his/her peers to guess the student. 3e. Create a calendar by solving math problems.	Wedemeyer, Avaril and Joyce Cejke. Creative Ideas for Teaching Exceptional Children (Denver: Love Publishing Co., 1970), p. 109. Thomas, Janet K. Teaching Arithmetic to Mentally Retarded Children (Minneapolis: T. S. Denison and Co., Inc., 1971), p. 42.

INSTRUCTIONAL SUB AREA: IV. Time

INSTRUCTIONAL OBJECTIVE: *B. The student will tell time to the nearest five minutes.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Read and write time to the half-hour with 100% accuracy.	The student will: 1a. Make a clock using a paper plate, tagboard for the hands, and a brad. Label the clock with the hours in one color and the minutes in a contrasting color. 1b. Complete a picture of a clock by writing in the missing number for the hours and minutes. 1c. After the teacher says a number from one to six and points to it on a clock, say the minutes that corresponds with that number. 1d. Shown pictures of clocks set at various times to the half-hour, say and then write the time.	Arithmetic Step by Step, Kit B, Unit IX, Level I DLM Moving Up in Time, #344
2. Read and write time to the quarter-hour with 100% accuracy.	2a. After the teacher says a number from six to nine and points to it on a clock, say the minute that corresponds with that number. 2b. Set a clock to match the time on a digital clock and read the time.	DLM Moving Up in Time, #344 Develop Number Skills, p. 162
3. Read and write time to the nearest five minutes with 100% accuracy.	3a. After the teacher says a number from nine to twelve and points to it on a clock, say the minute that corresponds with that number.	Level Three Math, Tape 8 Arithmetic Step by Step, Kit B, Unit IX, Level I

Performance Objectives	Activities	Materials/Resources
	3b. Write the time when shown a picture of a clock on a flashcard. 3c. When asked at random times throughout the day by the teacher, give the correct time. 3d. From pictures of clocks cut out from magazines, choose a picture at random and (1) write the time in digital form, (2) write and read the minutes after the hour, and (3) write and read the minutes before the hour. 3e. Write the time that each class period begins and ends.	Working With Numbers, p. 24

INSTRUCTIONAL SUB AREA: IV. Time

INSTRUCTIONAL OBJECTIVE: C. The student will use A.M. and P.M. to denote time of day.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Define A.M. and P.M. with 100% accuracy.	1a. Orally define A.M. and P.M.	DLM Moving Up in Time, #344
2. Indicate A.M. or P.M. when given specific events and times with 100% accuracy.	2a. Write either A.M. or P.M. beneath snapshots of students performing various activities. 2b. Write on the chalkboard three events or activities that usually occur in the A.M. and three that usually occur in the P.M. 2c. Write the time using either A.M. or P.M. to complete sentences involving events that occurred yesterday.	DLM Moving Up in Time, #344

SECOND SEMESTER

INSTRUCTIONAL SUB AREA: V. Geometry

INSTRUCTIONAL OBJECTIVE: *A. The student will draw a circle, triangle, square, rectangle, diamond, oval, and star.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Name shape when given a visual cue with 100% accuracy.	The student will: 1a. Choose from a box containing small shapes, the shape that corresponds to the shape shown and name the shape. 1b. While a peer shows a flashcard, name the shape on the card. 1c. Discuss how each shape is different.	Kinesthetic Shape and Discovery Boards Primary Number and Geometry Board
2. Draw a shape when provided a model with 100% accuracy.	2a. Bring to class a picture of each shape and trace an outline of the shape. 2b. Bring to class a picture of each shape and draw the shape. 2c. With peers holding a rope, form each shape.	Kinesthetic Shape and Discovery Boards Primary Number and Geometry Board
3. Draw a shape when dictated with 100% accuracy.	3a. Draw on a language master card the shape stated on the card. 3b. Draw a shape when dictated by a peer.	3a. Language master and cards
4. Draw a specific design using all seven shapes from oral directions with 90% accuracy.	4a. Draw a specific design from directions dictated by a peer.	Kinesthetic Shape and Discovery Boards

Performance Objectives	Activities	Materials/Resources
	4b. Draw a specific design from directions on language master cards.	4b. Language master cards

INSTRUCTIONAL SUB AREA: V. Geometry

INSTRUCTIONAL OBJECTIVE: B. The student will determine the perimeter of a square, rectangle, or triangle.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Find the perimeter of a square, rectangle, or triangle given the lengths of the sides with 85% accuracy.	The student will: 1a. Find the perimeter of objects in the classroom. 1b. Find the perimeter of the shapes when the measurements are dictated.	A General Mathematics Review, #513 Develop Number Skills, pp. 197-198
2. Find the perimeter of a square, rectangle, or triangle measuring the length of its sides with 85% accuracy. 43	2a. Draw pictures of squares, rectangles, and triangles, measure the shapes, and find the perimeters of the objects. 2b. Make shapes of squares, rectangles, and triangles by tearing construction paper, measuring the shapes, and find the perimeter of the shapes.	Ruler Construction paper Arithmetic Step by Step, Kit B, Unit IX, Level III
3. Find the perimeter of objects found in the classroom (e.g., desk, etc.).	3a. Randomly select the name of a classroom object from a box, find the object, measure the sides, and find the perimeter. 3b. Calculate the perimeter of three objects in the classroom and compare his/her measurements with those of a peer who measured the same objects.	Ruler A General Mathematics Review, #513

INSTRUCTIONAL SUB AREA: V. Geometry

INSTRUCTIONAL OBJECTIVE: C. The student will determine rectangles and/or squares of equivalent areas by counting squares which cover the interior.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Find the area of a square by counting squares which cover the interior with 80% accuracy.	1a. Construct a large square from smaller ones made from construction paper and compute the area.	Construction paper
	1b. Draw lines dividing a square into equal parts and compute the area.	Arithmetic Step by Step, Kit B, Unit IX, Level III
2. Match rectangles and/or squares with equivalents in area with 80% accuracy.	2a. Draw lines connecting pictures of rectangles and squares in various positions that are equivalents.	Primary Number and Geometry Board
	2b. Use clay to make rectangles and squares to match shapes of a given area.	Clay

INSTRUCTIONAL SUB AREA: V. Geometry

INSTRUCTIONAL OBJECTIVE: D. The student will use a picture and bar graph.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify the number of objects in a category using a picture graph with 100% accuracy.	The student will: 1a. Explain why a picture graph is called a picture graph. 1b. Identify and discuss the components of a picture graph. 1c. Bring to class pictures of picture graphs and identify the components. 1d. When shown a picture on a picture graph that represents a specific quantity, state the amount represented by two pictures.	Working With Numbers, pp. 96-99 Develop Number Skills, pp. 119-122
2. Solve word problems using a picture graph with 85% accuracy.	2a. Explain orally the basic operation used to solve a picture graph in which each symbol represents a quantity of one. 2b. Explain orally the basic operation used to solve a picture graph in which each symbol represents a quantity greater than one. 2c. Given an incomplete picture graph and its solution, complete the missing parts. 2d. Given a solution, create a picture graph that fits the solution.	Develop Number Skills, pp. 120-123 Tops Problem, Deck B

Performance Objectives	Activities	Materials/Resources
3. Identify the number of units in a category using a bar graph with 85% accuracy.	3a. Explain the differences between a picture and bar graph. 3b. Identify and discuss the components of a bar graph while pointing to them. 3c. Given a graph with units in various multiples, write the number of units. 3d. Analyze information on bar graphs found in magazines and newspapers.	Develop Number Skills, pp. 120-121, 123 Working With Numbers, pp. 96-98 3d. Newspapers and magazines
4. Create a bar graph with a minimum of three categories with 80% accuracy.	4a. Given an incomplete bar graph and its solution, complete the missing parts. 4b. Given a solution, create a bar graph that fits the solution. 4c. Given a situation, create a bar graph that depicts the situation.	Develop Number Skills, pp. 120-124 Tops Problem Deck B
5. Solve word problems using a bar graph with 80% accuracy.	5a. Solve word problems using a bar graph, given specific data. 5b. Given some basic data, create a problem, design a bar graph, and solve the problem.	Develop Number Skills, pp. 120-124 Tops Problem Deck B

INSTRUCTIONAL SUB AREA: VI. Measurement

INSTRUCTIONAL OBJECTIVE: *A. The student will measure an object to the nearest quarter-inch and centimeter.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify a quarter-inch on a ruler with 100% accuracy.	The student will: 1a. Draw a circle around the quarter-inch designation on a picture of a ruler. 1b. Color a quarter-inch on a picture of a ruler. 1c. Make a ruler using a tongue depressor, popsicle stick, or construction paper and make a quarter-inch.	Ruler Tongue depressor, popsicle stick, construction paper
2. Identify a centimeter on a ruler with 90% accuracy.	2. Repeat activities 1a through 1c to identify a centimeter on a ruler.	Ruler Tongue depressor, popsicle stick, construction paper
3. Measure an object less than 12 inches to the nearest quarter-inch with 100% accuracy.	3a. Measure the pencil with which he/she is writing. 3b. Make a border for his/her math book. 3c. Make picture frame for a snapshot. 3d. Identify objects in the classroom which are less than 12 inches in length.	Ruler 3b. Construction paper

Performance Objectives	Activities	Materials/Resources
4. Measure an object to the nearest centimeter with 100% accuracy.	4a. Select an item from his/her pocket, purse, or classroom and measure it.	Ruler
5. Draw a line a specific number of centimeters long with 90% accuracy.	5a. Make activity cards showing a number and a line that equals that number. 5b. Solve addition, subtraction, and multiplication problems and draw a line that equals the answer in centimeters. 5c. Draw a line that equals his/her age. 5d. Draw a line that equals his/her weight and when the digits are added and multiplied. 5e. Given a number dictated by the teacher, draw lines in multiples of two, three, four, and five using that number.	Ruler

INSTRUCTIONAL SUB AREA: VI. Measurement

INSTRUCTIONAL OBJECTIVE: B. The student will apply standard units of measure.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Measure his/her height to the nearest inch with 95% accuracy.	1a. Lie on the floor while a peer tapes strips of paper at his/her head and feet. The student will then measure the distance between the strips of paper.	1a. Tape, ruler, yardstick
	1b. Measure his/her height by using a ribbon. (The ribbon can be hung on a bulletin board, the student's height checked periodically and additional ribbons added to indicate growth.)	1b. Ribbon
2. Read a thermometer in either Fahrenheit or Celsius degrees with 90% accuracy.	2a. Using a drawing of a thermometer, read the number of degrees indicated by an arrow.	Fahrenheit thermometer
	2b. Given a temperature and a picture of a thermometer, color the mercury to match the temperature given.	Celsius thermometer
	2c. Take a peer's temperature.	Arithmetic Step by Step, Kit B, Unit IX, Level I
	2d. Periodically throughout the day read and chart the temperature of a thermometer placed outside of the classroom window.	
	2e. Read the temperature on thermometers placed in cups of liquid ranging from cold to warm.	

Performance Objectives	Activities	Materials/Resources
3. Change number of (a) feet to an equivalent number of inches, (b) inches to an equivalent number of feet, (c) feet to an equivalent number of yards, (d) yards to an equivalent number of feet, (e) meters to an equivalent number of centimeters, (f) centimeters to an equivalent number of meters, (g) pounds to an equivalent number of ounces, (h) ounces to an equivalent number of pounds, (i) quarts to an equivalent number of pints, (j) pints to an equivalent number of quarts, (k) gallons to an equivalent number of quarts, (l) quarts to an equivalent number of gallons	3a. Using a ruler, count the number of inches in a foot. 3b. Using a ruler and a yardstick, count the number of feet in a yard. 3c. Using a meter stick, count the number of centimeters. 3d. Find an item that weighs an ounce and using a postage scale, determine how many of that item are needed to equal a pound. 3e. Using clear, gallon bottles with lines to indicate a cup, pint, quart, and gallon, pour water dyed with food coloring into the jars to equal a given quantity. 3f. Calculate the perimeter of the classroom in inches, feet, yards, centimeters, and meters. 3g. Weigh him/herself and convert the pounds to ounces. 3h. Given specific quantities and using empty milk cartons in variable sizes, select the appropriate milk cartons to make two combinations of the given quantities. 3i. Complete a conversion table.	1 M BB, Block 6 1 M CC, Block 7 Meter, Educational Service, Inc., The Spice Series Arithmetic Step by Step, Kit B, Unit IX Develop Number Skills, pp. 135-150, 191-196

Performance Objectives	Activities	Materials/Resources
(m) pints to an equivalent number of cups, and (n) cups to an equivalent number of pints with 85% accuracy.		

INSTRUCTIONAL SUB AREA: VII. Fractions

INSTRUCTIONAL OBJECTIVE: *A. The student will identify fractional parts of a whole.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Divide a whole into halves, thirds, fourths, and fifths with 100% accuracy.	The student will: 1a. Using a ruler to divide pictures of objects and shapes in half, determine if the objects and pictures are symmetrical. 1b. Given pictures of shapes divided into two, three, four, and five parts, color the shapes that have equally divided parts. 1c. Cut paper plates into halves, thirds, fourths, and fifths. 1d. Make squares from construction paper and divide them into halves, thirds, fourths, and fifths.	Ruler Working With Numbers, p. 100 Level Three Math, Tape 6 Paper plates Construction paper
2. Indicate the shaded fractional part of a whole with 100% accuracy.	2a. State the number of parts into which the whole is divided. 2b. Given pictures of shapes divided into halves, thirds, fourths, and fifths, color a fractional part equal to the fractional number. 2c. Given pictures of various shapes with fractional parts shaded, write the fractional equivalent.	Working With Numbers (New Triangle Book), pp. 115-120 Computapes, Module 5, FR 1

INSTRUCTIONAL SUB AREA: VII. Fractions

INSTRUCTIONAL OBJECTIVE: B. The student will compare fractional parts.

PERFORMANCE OBJECTIVES	ACTIVITIES	MATERIALS/RESOURCES
The student will: 1. Identify the larger/ smaller of two fractions with like denominators (2, 3, 4, or 5) with 90% accuracy.	The student will: 1a. Given sets of like shapes shaded in fractional parts, write an L under the shape in each set with a larger fractional part shaped, an S under the shape with a smaller fractional part shaded, and write the fractional equivalent. e.g. L $\frac{2}{4}$ S $\frac{1}{4}$ 1b. Repeat activity 1a using dissimilar shapes. e.g. S $\frac{1}{3}$ L $\frac{2}{3}$ 1c. Define the term denominator. 1d. Given sets of fractions with like denominators, circle the fraction in each set that is the larger.	Computapes, Module 8, FR 3 Arithmetic Step by Step, Kit B, Unit VII, Level I

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Performance Objectives	Activities	Materials/Resources
2. Match equivalent fractions with 85% accuracy.	2a. Explain the term equivalent fractions. 2b. Given two shapes with one divided and shaded into fractional parts, divide and shade the other shape into fractional parts equivalent to the first, and write the fractions. e.g. $\frac{2}{4}$ = 2c. Without the use of shapes, explain two methods of finding equivalent fractions.	1 M BB Blocks 12, 15, 19 1 M CC Block 15
3. Identify the larger/ smaller of two fractions with different denominators (2, 3, 4, or 5) with 80% accuracy. 54	3a. Given pairs of fractions, circle the pairs with different denominators. 3b. Explain the process of identifying the larger/ smaller of two fractions with different denominators. 3c. Given pairs of fractions with different denominators, circle the larger fractions.	1 M BB Blocks 12, 15, 19 1 M CC Block 15

INSTRUCTIONAL SUB AREA: VIII. Division

INSTRUCTIONAL OBJECTIVE: *A. The student will divide three-digit numbers by one-digit divisors without remainders.

PERFORMANCE OBJECTIVES	ACTIVITIES	MATERIALS/RESOURCES
The student will:	The student will:	
1. Write the quotient of 25 division facts within five minutes with 100% accuracy.	1a. Write the quotient of division problems shown on flashcards. 1b. Write the quotient of division problems dictated by a peer. 1c. Write the quotient of division problems taped on language master cards.	Working With Numbers (Rectangle Book), pp. 21, 54 Working With Numbers (New Triangle Book), pp. 85-91 1 M BB Block 10
2. Divide two-digit numbers by one-digit divisors without regrouping with 100% accuracy.	2a. Write two methods of writing a division problem. 2b. Define the terms divisor, dividend, and quotient. 2c. Illustrate each step of long division at the blackboard. 2d. Solve division problems written on flashcards. 2e. Solve a puzzle using division problems.	Working With Numbers (New Triangle Book), pp. 92-94 1 M BB Block 14
3. Divide a three-digit number by a one-digit divisor without regrouping with 95% accuracy.	3. Complete activities such as 2a through 2e, using a three-digit number and a one-digit divisor.	Working With Numbers (Rectangle Book), pp. 25 1 M BB Blocks 17, 18

Performance Objectives	Activities	Materials/Resources
4. Use multiplication to check division with 100% accuracy.	4a. Shown a division problem that has been solved, explain the checking process. 4b. Check the accuracy of division problems found on flashcards or language master cards.	1 M CC, Block 16 Computapes, Module 4, MD 28 Working With Numbers (Rectangle Book), p. 37

INSTRUCTIONAL SUB AREA: VIII. Division

INSTRUCTIONAL OBJECTIVE: B. The student will divide three-digit numbers by one-digit divisors with remainder.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Divide one-digit numbers by one-digit divisors with remainders with 85% accuracy.	The student will: 1a. State orally division problems in which the remainder is one. 1b. Given four numbers, write a division problem and its solution using those numbers. 1c. Complete a diagram by using the remainder as a clue.	Working With Numbers (Rectangle Book), pp. 72-73 IM BB, Blocks 17, 18
2. Divide two-digit numbers by one-digit divisors with remainders with 85% accuracy.	2a. Complete division problems with one-digit divisors and two-digit dividends. 2b. Play "Ring Toss" to select three numbers to be used to write, solve, and check division problems.	Working With Numbers (Rectangle Book), pp. 73-78 IM BB, Blocks 17, 18
3. Divide three-digit numbers by one-digit divisors with remainders with 85% accuracy.	3a. Fill in the missing numbers in division problems. 3b. Given four numbers, write, solve, and check a division problem.	Working With Numbers (Rectangle Book), pp. 79, 81-82

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INSTRUCTIONAL SUB AREA: IX. Practical Applications

INSTRUCTIONAL OBJECTIVE: *A. The student will solve word problems involving two operations requiring addition, subtraction, or multiplication.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Solve word problems involving one operation with 100% accuracy.	The student will: 1a. Given a number sentence, develop a word problem. 1b. Determine the number of math books needed if each student in the class is given two books. 1c. Given a group of number sentences and word problems, match each number sentence with the appropriate word problem.	Working With Numbers (Rectangle Book), pp. 101-114 IM 3B, Blocks 8, 13
2. Solve word problems involving two steps using the same operation with 90% accuracy.	2a. Given a word problem, select the information necessary to solve the problem. 2b. Given a list of math sentences and a list of word problems, match the math sentences with the correct word problem.	Tops Problem Deck A
3. Solve word problems involving two different operations with 80% accuracy.	3a. Given number sentences, write and solve the word problems. 3b. Participate in a relay race to solve word problems written on the chalkboard.	Working With Numbers (Rectangle Book), pp. 114-115 IM BB, Blocks 20

INSTRUCTIONAL SUB AREA: IX. Practical Applications

INSTRUCTIONAL OBJECTIVE: B. The student will solve word problems involving measurement, time, and money concepts.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Solve word problems involving units of measure with 85% accuracy.	The student will: 1a. Rewrite a recipe making the units smaller. 1b. Using a distance map, write a word problem involving the distance between two points, and solve the problem.	Develop Number Skills, p. 186
2. Solve word problems involving operations with money with 90% accuracy.	2a. Compare the price of hamburgers at three establishments and compute the average cost. 2b. Given a specific allowance, determine the money that remains after buying lunch for a week.	Working With Numbers (Rectangle Book), p. 93 Tops Problem Deck B
3. Solve word problems involving units of time with 80% accuracy.	3a. Determine the time remaining in a class period after the assignments are completed. 3b. Determine the time it takes to walk and to jog around the school and compare the two.	Develop Number Skills, pp. 166- 168 Tops Problem Deck B

TEACHING UNITS

GRADE 7

FIRST SEMESTER

INSTRUCTIONAL SUB AREA: I. Numeration

INSTRUCTIONAL OBJECTIVE: *A. The student will read and write four-digit numbers.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Read numerals orally when presented number cards at random with 100% accuracy.	1a. Select a number card from cards placed face down and read the number.	Number cards
	1b. Construct number cards using numbers found in magazines and newspapers, exchange the cards with peers for oral recitation.	Magazines, newspapers, tagboard
	1c. Using the telephone directory, make flashcards using the numbers and read them.	Telephone directory
	1d. Play "Number Bingo."	Number Bingo cards and markers
2. Write numerals when dictated at random with 100% accuracy.	2a. Write numerals dictated by peers.	
	2b. Write numerals using pre-recorded language master cards made by the student.	Blank language master cards
3. Arrange number cards in order with 100% accuracy.	3a. Arrange number cards in sequence that have been placed face up on the table.	
	3b. Using number cards made by peers, place ten cards in sequence.	
	3c. Place number cards sequentially in pockets on tagboard.	

Performance Objectives	Activities	Materials/Resources
4. Convert a four-digit number in expanded form to the compact form with 95% accuracy.	4a. Match a list of numbers in expanded form with a list in compact form. 4b. Write the missing digit(s) of a number in compact form, given that number in expanded form. 4c. Write the expanded form of a number dictated by the teacher.	SIM, Revised (Pink), pp. 13-15, 31 Develop Number Skills, pp. 32, 40
5. Analyze a given number by its designated place value with 95% accuracy.	5a. Make a chart that indicates place values. 5b. Tell the value of numbers using a place value chart. 5c. Use beans of different colors to indicate place values. 5d. Given a number, say or write the number of ones, tens, hundreds, and thousands. 5e. Circle each digit of a number for a place value dictated by the teacher.	SIM, Revised (Pink), pp. 13-15, 31 Arithmetic Step by Step, Kit B, Unit II, Level III
6. Match the number with its word name with 100% accuracy.	6a. Given a list of numbers and a list containing word names, draw various colored lines connecting the two. 6b. Given a sentence containing a number, rewrite the sentence using the word name. 6c. Match puzzle pieces containing numbers and word names. 6d. Find word names in a puzzle and write the number.	SIM, Revised (Green), pp. 2, 6 SIM, Revised (Pink), pp. 4, 9 Arithmetic Step by Step, Unit I, Level II Tag board

Performance Objectives	Activities	Materials/Resources
7. Name the number which comes before and after a given number with 100% accuracy.	7a. Select a number at random and say the number that comes before and after the number. 7b. Say the number that comes before and after a number dictated by a peer.	SIM, Revised (Pink), pp. 9-10, 21-22 Computapes, Module 1, AS 1 Arithmetic Step by Step, Kit B, Unit II, Level III

INSTRUCTIONAL SUB AREA: I. Numeration

INSTRUCTIONAL OBJECTIVE: B. The student will recognize and use Roman numerals (values to 50).

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Match the equivalent Arabic numerals and Roman numerals with 85% accuracy.	1a. Given a list of Arabic numerals and a list of Roman numerals, draw a line to match the equivalent Arabic and Roman numerals.	SIM, Revised (Pink), p. 43 SIM, Revised (Green), p. 66
	1b. Match puzzle pieces containing Arabic and Roman numerals.	Arithmetic Step by Step, Kit B, Unit I, Level III
2. Place Roman numerals in sequence with 85% accuracy.	2a. Using toothpicks, make Roman numerals and place them in sequence.	Toothpicks SIM, Revised (Pink), p. 43
	2b. Select Roman numerals at random from a box and place in sequence on the table.	SIM, Revised (Green), p. 66
	2c. Rearrange students in sequence who are holding Roman numeral cards.	Arithmetic Step by Step, Kit B, Unit I, Level III
3. Convert Arabic numerals to Roman numerals and Roman numerals to Arabic numerals with 85% accuracy.	3a. Complete a chart using Arabic and Roman numerals.	SIM, Revised (Pink), p. 43
	3b. Given a card containing an Arabic numeral, write its Roman equivalent on the reverse side.	SIM, Revised (Green), p. 66
	3c. Given a card containing a Roman numeral, write its Arabic equivalent on the reverse side.	Arithmetic Step by Step, Kit B, Unit I, Level III
	3d. Rewrite a story containing Arabic numerals using Roman numerals.	

Performance Objectives	Activities	Materials/Resources
	3e. Given an addition or subtraction problem, rewrite and solve the problem using Roman numerals.	

INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: A. The student will add four-digit numbers with regrouping.

PERFORMANCE OBJECTIVES	ACTIVITIES	MATERIALS/RESOURCES
The student will:	The student will:	
1. Add four-digit numbers without regrouping with 85% accuracy.	1a. Given a problem written in horizontal form, rewrite it in vertical form and solve.	Develop Number Skills, pp. 33, 39
	1b. Add four-digit numbers using letters to represent numbers.	SIM, Revised (Pink), p. 173
	1c. Add two pairs of two-digit numbers separately, place the two sums together and read the number.	
2. Add four-digit numbers with regrouping with 85% accuracy.	2a. Explain the process of regrouping.	Develop Number Skills, pp. 43, 53
	2b. Demonstrate regrouping using an overhead projector.	Overhead projector and transparencies
	2c. Select a four-digit number and add to it the same number written in reverse order.	SIM, Revised (Pink), pp. 174-175, 276
		A General Mathematics Review (Multi-Media Productions, Inc.) Addition and Subtraction

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Performance Objectives	Activities	Materials/Resources
3. Add four-digit numbers involving money with regrouping with 85% accuracy.	3a. Select the cost of items from a catalog and add. 3b. Add the totals of three grocery receipts.	Catalog Grocery receipts Develop Number Skills, 65-66 SIM, Revised (Pink), pp. 175, 276

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INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: *B. The student will subtract four-digit numbers from four-digit numbers with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Subtract four-digit numbers without regrouping with 90% accuracy.	The student will: 1a. Solve problems by subtracting a series of four-digit numbers. 1b. Write the missing numbers in subtraction problems. 1c. Play "Hide and Seek" by locating the hidden answers to subtraction problems.	Tops Problem Deck A Develop Number Skills, pp. 34, 38-40 SIM, Revised (Pink), pp. 177, 279 Computapes, Module 1, AS 20
2. Subtract four-digit numbers with regrouping with 85% accuracy.	2a. Use an abacus to solve subtraction problems. 2b. Find the difference between the population of two schools. 2c. Demonstrate subtraction with regrouping on the chalkboard.	Abacus Develop Number Skills, pp. 46, 48, 53-54 SIM, Revised (Pink), pp. 178-179, 279 IM BB, Block 4 IM CC, Block 2

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Performance Objectives	Activities	Materials/Resources
3. Subtract four-digit numbers involving money with regrouping with 90% accuracy.	3a. Select paper coins and currency for two amounts stated by a peer, write the amounts as a subtraction problem, and solve. 3b. Subtract given amounts from multiples of $10.00.	Develop Number Skills, pp. 65-66 SIM, Revised (Pink), pp. 179, 279

INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: C. The student will multiply two two-digit numbers with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Multiply two two-digit numbers without regrouping with 90% accuracy.	1a. Write the missing number(s) in multiplication problem products. 1b. Write on the board answers to problems dictated by the teacher.	Computapes, Module 3, MD 22, 24 IM BB, Block 16
2. Multiply two-digit numbers by one-digit numbers with regrouping with 95% accuracy.	2a. Given the solution, write the missing numbers in the problem. 2b. Write the missing numbers in multiplication problems. 2c. Complete a multiplication matrix made from cards. As one problem is completed, move the multipliers to the right and continue the process.	SIM, Revised (Green), pp. 146-157 Develop Number Skills, pp. 181, 185, 187, 189, 190 IM BB, Block 11
3. Multiply two two-digit numbers with regrouping with 85% accuracy.	3a. Select a two-digit number and multiply it by the reverse of the number. 3b. Given pairs of multiplication problems, circle the problems that require regrouping. 3c. Respond orally to questions involving regrouping with multiplication.	Arithmetic Step by Step, Kit B, Unit VI, Level II IM BB, Block 16 IM BB, Block 9

Performance Objectives	Activities	Materials/Resources
4. Multiply two-digit numbers involving money with 85% accuracy.	4a. Complete charts involving the purchase of specific items for the class. 4b. Using items in the classroom that have been labeled with a price tag, calculate the products using two-digit numbers dictated by the teacher. 4c. Solve simple word problems.	SIM, Revised (Green), p. 234 Arithmetic Step by Step, Kit B, Unit VIII, Level III

INSTRUCTIONAL SUB AREA: II. Basic Operations

INSTRUCTIONAL OBJECTIVE: D. The student will divide four-digit numbers by two-digit divisors without remainders.

PERFORMANCE OBJECTIVES	ACTIVITIES	MATERIALS/RESOURCES
The student will: 1. Write the quotient of 40 division facts with 90% accuracy.	The student will: 1a. When shown flashcards, write the quotient. 1b. Write the quotient to division problems on language master cards. 1c. Write the quotient of division problems dictated by a peer.	Flashcards Language master cards SIM, Revised (Green), pp. 123-125, 181-185 SIM, Revised (Pink), pp. 93, 95, 97-100, 103, 105, 107, 110, 208 IM BB, Block 10 Computapes, Module 3, MD 19, 20
2. Divide four-digit numbers by two-digit divisors without remainders with 90% accuracy.	2a. Write two methods of writing division problems. 2b. Illustrate each step in long division at the chalkboard. 2c. Solve division problems to shade in areas to make a picture.	IM BB, Block 17 IM CC, Blocks 14, 18 A General Mathematics Review, #513 (Multi-Media Productions, Inc.), Division and Multiplication

Performance Objectives	Activities	Materials/Resources
3. Divide four-digit numbers by two-digit divisors with remainders with 90% accuracy.	3a. With a peer, match quotient cards with the correct card. 3b. With a peer, solve division problems with no remainder when presented on language master cards.	IM BB, Block 17 IM CC, Block 10

INSTRUCTIONAL SUB AREA: III. Time

INSTRUCTIONAL OBJECTIVE: A. The student will tell time to the nearest minute.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Read and write time to the quarter-hour with 100% accuracy.	The student will: 1a. Say the minute that corresponds to number indicated by the teacher on the clock. 1b. Set a clock to match the time on a digital clock, say the time, and write the time. 1c. Write the time when shown a picture of a clock on a flashcard.	SIM, Revised (Green), p. 65 Develop Number Skills, p. 162
2. Read and write time to the nearest five minutes with 100% accuracy.	2a. Write an alternate method of giving the time dictated by the teacher. 2b. Say an alternate method of giving the time dictated by a peer. 2c. Cut out pictures of clocks from magazines and newspapers, read and write the times shown on the clocks.	SIM, Revised (Green), p. 40 Working With Numbers, pp. 132-134, 137, 146 Magazines and newspapers
3. Read and write time to the minute with 100% accuracy.	3a. When asked at random times throughout the day, give the correct time. 3b. Make clocks indicating the starting and ending times for each class period, read and write the times.	SIM, Revised (Pink), p. 20 Develop Number Skills, pp. 162-165, 167-168 DLM, Moving Up in Time #344 Level Three Math, Tape 8

INSTRUCTIONAL SUB AREA: III. Time

INSTRUCTIONAL OBJECTIVE: *B. The student will apply time concepts to daily activities.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Develop a schedule with 97% accuracy.	The student will: 1a. Determine the length of time necessary to prepare for school and write the time necessary for each activity. 1b. Write the household tasks to be completed daily, weekly, and monthly and the time necessary to do each task. 1c. Construct a pocket-size daily planner and use it to schedule activities.	
2. Determine the time difference between events with 85% accuracy.	2a. Determine the time difference between class periods. 2b. Determine how long it takes to complete a page of math problems. 2c. Determine how long it takes to walk to school. 2d. Determine how long it takes to eat lunch and have time for a recreational activity. 2e. Determine how long it takes to walk from class to class.	

Performance Objectives	Activities	Materials/Resources
3. Plan the amount of time needed to complete a task with 95% accuracy.	3a. Plan how much earlier he/she must get up in order to arrive to school early for a meeting. 3b. Plan the amount of time it requires to ride the bus downtown. 3c. Plan the amount of time required to buy groceries.	

SECOND SEMESTER

INSTRUCTIONAL SUB AREA: IV. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: *A. The student will find the area of a square, rectangle, and triangle.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Determine the area of a square and rectangle by counting squares which cover the interior with 90% accuracy.	The student will: 1a. Construct a large square from smaller ones made from construction paper and compute the area. 1b. Draw lines dividing a square into equal parts and compute the area.	Construction paper SIM, Revised (Green), pp. 109, 214 SIM, Revised (Pink), pp. 135-138
2. Determine the area of a rectangle, square, and triangle given the lengths of the sides with 90% accuracy.	2a. Find the area of objects found in the classroom. 2b. Find the perimeter of the shapes when the measurements are dictated.	SIM, Revised (Green), pp. 109, 214 SIM, Revised (Pink), pp. 135-138
3. Determine the area of a triangle, rectangle, and square measuring the lengths of the sides with 90% accuracy.	3a. Draw pictures of the specified shapes, measure the sides and find the area. 3b. Make shapes using construction paper, measure the sides, and find the area.	Construction paper

INSTRUCTIONAL SUB AREA: IV. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: B. The student will apply the standard units of measure.

PERFORMANCE OBJECTIVES	ACTIVITIES	MATERIALS/RESOURCES
The student will: (Review) 1. Change the number of: (a) feet to an equivalent number of inches, (b) inches to an equivalent number of feet, (c) feet to an equivalent number of yards, (d) yards to an equivalent number of feet, (e) meters to an equivalent number of centimeters, (f) centimeters to an equivalent number of meters,	The student will: 1a. Read a conversion chart. 1b. Given a measurement, state an alternate method of giving the measurement. 1c. Utilize classroom objects and items, utensils from home to convert measurements.	SIM, Revised (Green), pp. 203, 207, 209, 212, 216-218 SIM, Revised (Pink), pp. 119-123, 130-131 Working With Numbers, pp. 93-100, 109 Develop Number Skills, pp. 135-146, 149-150, 191-196, 199-200 IM BB, Block 6

Performance Objectives	Activities	Materials/Resources
(g) pounds to an equivalent number of ounces, (h) ounces to an equivalent number of pounds, (i) quarts to an equivalent number of pints, (j) pints to an equivalent number of quarts, (k) gallons to an equivalent number of quarts, (l) quarts to an equivalent number of gallons, (m) pints to an equivalent number of cups, and (n) cups to an equivalent number of pints with 85% accuracy.		

Performance Objectives	Activities	Materials/Resources
2. Change the number of: (a) ounces to an equivalent number of pounds, (b) pounds to an equivalent number of ounces, (c) pounds to an equivalent number of tons, (d) tons to an equivalent number of ounces, (e) feet to an equivalent number of miles, (f) kilometers to an equivalent number of meters, (g) meters to an equivalent number of kilometers, (h) teaspoons to an equivalent number of tablespoons, and	2. Repeat activities 1a, 1b, and 1c.	SIM, Revised (Green), pp. 203, 207, 209, 212, 216-218 SIM, Revised (Pink), pp. 119-123, 130-131, 133 Working With Numbers, pp. 93-100, 109 Develop Number Skills, pp. 135-146, 149-150, 191-196, 199-200

Performance Objectives	Activities	Materials/Resources
(i) tablespoons to an equivalent number of teaspoons with 85% accuracy.		
3. Measure his/her weight in pounds with 100% accuracy.	3a. Measure his/her weight before and after lunch. 3b. Keep a record of his/her weight throughout the year.	Scale

INSTRUCTIONAL SUB AREA: IV. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: C. The student will obtain information from picture graphs, line graphs, and bar graphs.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify the number of objects in a category using picture, line, and bar graphs with 80% accuracy.	The student will: 1a. Explain the differences and similarities of picture, line, and bar graphs. 1b. Explain the components of each type of graph. 1c. Given a graph of each type with units in various multiples, write the number of units. 1d. Analyze information on each type of graph found in magazines and newspapers.	Develop Number Skills, pp. 118-124 SIM, Revised (Pink), pp. 159-160, 181-182
2. Solve word problems using graphs with 80% accuracy.	1a. Explain the process of solving problems in using each type of graph. 1b. Given basic data, construct a picture, line, and bar graph to illustrate the data, and solve the problem.	Develop Number Skills, pp. 120-124
3. Create line and bar graphs using a minimum of five categories with 80% accuracy.	3a. Given incomplete graphs, complete the missing parts. 3b. Given a solution, create a graph that fits the solution.	SIM, Revised (Pink), pp. 159-160, 181-182

INSTRUCTIONAL SUB AREA: V. Fractions

INSTRUCTIONAL OBJECTIVE: *A. The student will add and subtract fractions with like denominations.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Specify the numerator and denominator of a fraction with 100% accuracy.	The student will: 1a. Define numerator and denominator. 1b. Shown a fraction, circle either the numerator or denominator as specified by the teacher. 1c. Write in numerator and denominator in colors specified by the teacher.	SIM, Revised (Green), pp. 159-162 SIM, Revised (Pink), pp. 141-142, 252
2. Arrange fractions in sequence from smaller to larger with 95% accuracy.	2a. Select at random number cards containing fractions and arrange in sequence. 2b. Rearrange students who are holding fraction cards. 2c. Given pairs of fractions, write either < or > to make the fraction sentence true.	Fraction number cards SIM, Revised (Green), pp. 163, 177-178 IM BB, Block 12
3. Add fractions with like denominators with 90% accuracy.	3a. Play "Fraction Bingo." 3b. Demonstrate the addition of fractions using an overhead projector. 3c. Add fractions dictated by the teacher.	SIM, Revised (Pink), pp. 141-142, 252 IM BB, Blocks 15, 19 Computapes, Module 5, FR 6

Performance Objectives	Activities	Materials/Resources
4. Subtract fractions with like denominators with 90% accuracy.	4. Repeat activities 3a through 3c to subtract fractions.	SIM, Revised (Pink), pp. 267-268, 272-273 IM BB, Blocks 15, 19 Computapes, Module 5, FR 7

INSTRUCTIONAL SUB AREA: V. Fractions

INSTRUCTIONAL OBJECTIVE: B. The student will add and subtract fractions with different denominators.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Determine the least common denominator of two or more fractions with 80% accuracy.	The student will: 1a. Verbally explain how to determine the least common multiple. 1b. Select a number and write the prime factors on the board.	Computapes, Module 5, FR 14 A General Mathematics Review, #513 (Multi-Media Productions, Inc.)
2. Add fractions with different denominators with 80% accuracy.	2a. Draw illustrations of fractions with different denominators, write the fractions and add. 2b. Add fractions dictated by a peer.	IM BB, Blocks 15, 9 Computapes, Module 5, FR 15
3. Subtract fractions with different denominators with 80% accuracy.	3. Repeat activities 2a and 2b to subtract fractions.	IM BB Blocks 15, 19 Computapes, Module 5, FR 15

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INSTRUCTIONAL SUB AREA: VI. Practical Applications

INSTRUCTIONAL OBJECTIVE: *A. The student will solve word problems involving two operations requiring addition, subtraction, multiplication, or division.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Solve word problems involving two steps using the same operation with 95% accuracy.	The student will: 1a. Compose and exchange word problems with peers. 1b. Given a math sentence, develop a word problem.	Tops Problem Decks B, C Level Three Math, Tape 7
2. Solve word problems involving two different operations with 90% accuracy.	2. Participate in a relay race to solve word problems on the chalkboard.	Tops Problem Decks B, C A General Mathematics Review, #513 (Multi-Media Productions, Inc.), Division and Multiplication

INSTRUCTIONAL SUB AREA: VI. Practical Applications

INSTRUCTIONAL OBJECTIVE: B. The student will solve word problems involving measurement, time, and money concepts.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Solve word problems involving units of measure with 80% accuracy.	The student will: 1a. Develop and solve a word problem using units of measure. 1b. Given a word problem involving units of measure, substitute different numbers in the problem, and solve.	SIM Revised (Pink), p. 248 Tops Problem Deck B Arithmetic Step by Step, Kit B, Unit IX, Level II
2. Solve word problems involving operations with money with 80% accuracy.	2a. Compute the cost of buying lunch for a week given a specific menu. 2b. Match number sentences with the correct word problem.	SIM, Revised (Pink), p. 169 Tops Problem Deck B
3. Solve word problems involving units of time with 80% accuracy.	3a. Compute the time necessary to complete several activities within a given time period. 3b. Compose and exchange word problems with peers.	Tops Problem Deck B Arithmetic Step by Step, Kit B, Unit IX, Level II

TEACHING UNITS

GRADE 8

FIRST SEMESTER

INSTRUCTIONAL SUB AREA: I. Basic Operations

INSTRUCTIONAL OBJECTIVE: A. The student will add five-digit numbers with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Add two five-digit numbers with regrouping with 80% accuracy.	The student will: 1a. Identify the place value of each number before adding. 1b. Write two five-digit numbers from dictation and add. 1c. Write the missing digits of problems where the sum is partially given.	SIM (Yellow), pp. 37, 40 SIM, Revised (Purple), pp. 14, 17
2. Add four five-digit numbers with regrouping with 80% accuracy.	2a. Add four five-digit numbers found on a population map. 2b. Play "Addition Relay." 2c. Solve addition problems to shade in areas that form a pattern.	Map SIM, Revised (Purple), p. 14 A General Mathematics Review. #513 (Multi-Media Productions, Inc.) Develop Number Skills, p. 76
3. Add five-digit numbers involving money notation with regrouping with 80% accuracy.	3a. Add salaries found in the classified section of the newspaper. 3b. Solve addition problems dictated by a peer using an overhead projector.	Newspaper Overhead projector

INSTRUCTIONAL SUB AREA: I. Basic Operations

INSTRUCTIONAL OBJECTIVE: B. The student will subtract five-digit numbers with regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Subtract five-digit numbers without regrouping with 85% accuracy.	The student will: 1a. Identify the place value of each number before subtracting. 1b. Subtract numbers recorded on language master cards.	 Language master cards SIM (Yellow), p. 40 SIM, Revised (Purple), pp. 11, 16
2. Subtract five-digit numbers with regrouping with 80% accuracy.	2a. Write the missing digits of problems where the answer is partially given. 2b. Write two five-digit numbers from dictation and subtract.	SIM (Yellow), pp. 38, 40 SIM, Revised (Purple), pp. 15-17
3. Subtract five-digit numbers involving money notation with regrouping with 80% accuracy.	3a. Subtract five-digit numbers found in a catalog. 3b. Convert two five-digit numbers into money notation and subtract.	Sales catalog A General Mathematics Review, #513 (Multi-Media Productions, Inc.), Addition and Subtraction

INSTRUCTIONAL SUB AREA: I. Basic Operations

INSTRUCTIONAL OBJECTIVE: *C. The student will multiply two-digit numbers without regrouping.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Multiply two two-digit numbers without regrouping with 90% accuracy.	The student will: 1a. Solve multiplication problems written on language master cards. 1b. Solve multiplication problems dictated by a peer. 1c. Solve a cross-number puzzle by solving multiplication problems.	SIM (Yellow), p. 47 SIM, Revised (Purple), pp. 25-26
2. Multiply two-digit numbers by one-digit numbers with regrouping with 95% accuracy.	2a. Demonstrate the process of regrouping in multiplication at the chalkboard. 2b. Select a flashcard containing a two-digit number and multiply that number by one of the digits of the number.	SIM (Yellow), pp. 50-53 SIM, Revised (Purple), p. 24 Flashcards
3. Multiply two two-digit numbers with regrouping with 90% accuracy.	3a. Demonstrate the process of regrouping in multiplication using the overhead projector. 3b. Select fashcards containing two-digit numbers at random and multiply.	Overhead projector Flashcards SIM (Yellow), pp. 69-70 SIM, Revised (Purple), pp. 27-28

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Performance Objectives	Activities	Materials/Resources
4. Multiply two-digit numbers involving money with 95% accuracy.	4a. Complete a chart showing the cost of items for a specific number of students. 4b. Select two number cards at random, convert one number to money notation, and multiply the two numbers.	SIM, Revised (Purple), p. 30 Number cards

INSTRUCTIONAL SUB AREA: I. Basic Operations

INSTRUCTIONAL OBJECTIVE: D. The student will divide four-digit numbers by two-digit divisors without remainders.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Write the quotient of 40 division facts with 90% accuracy.	The student will: 1a. Write the quotient of problems dictated by the teacher. 1b. Participate in an oral flashcard drill within a specified time limit.	HISD Film #6484, Division, 14 min. Computapes, Module 3, MD 16-20 IM BB Block 10
2. Divide four-digit numbers by two-digit divisors without remainders with 85% accuracy.	2a. Given a list of division sentences and a list of quotients, draw lines matching the two correctly. 2b. Solve division problems written on language master cards.	SIM, Revised (Purple), p. 38 IM BB, Block 17 IM CC, Block 10 Language master cards
3. Divide four-digit numbers by two-digit divisors with remainders with 80% accuracy.	3a. Solve division problems using the overhead projector. 3b. Solve division problems dictated by a peer.	SIM, Revised (Purple), p. 39 IM BB, Block 17 IM CC, Blocks 14, 18

INSTRUCTIONAL SUB AREA: II. Money

INSTRUCTIONAL OBJECTIVE: A. The student will select coin combinations whose value equals a dollar.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Match equivalent sets of coins (value to one dollar) with 100% accuracy.	The student will: 1a. Shown a picture of equivalent sets of coins, replicate the picture using paper coins. 1b. Shown a coin, write the number of that coin needed to equal one dollar. 1c. Shown a coin, state the fractional part of a dollar the coin represents. 1d. Shown an amount written on a flashcard, give the peer sitting on the right the appropriate number of paper coins and the peer sitting on the left an equivalent set.	Paper coins Develop Number Skills, pp. 56-57 Level Three Math, Tape 8
2. Complete a set of coins for a given value given a partial set with 95% accuracy.	2a. Verbally state the amount of money necessary to complete the set. 2b. Draw lines connecting sets for given values.	Develop Number Skills, pp. 65-66 Money Bingo
3. Select coins which equal a given value to one dollar with 85% accuracy.	3a. Referring to a cafeteria menu, write his/her choice of lunch foods for five days in one column and tape the paper coins necessary to purchase the items in the second column.	Cafeteria menu Develop Number Skills, p. 104

Performance Objectives	Activities	Materials/Resources
	3b. Select coins equal to a value dictated by the teacher. 3c. Circle an item that costs one dollar or less in a catalog and select the coins which equal the cost.	Level Three Math, Tape 8 Catalog
4. Select the appropriate coins to purchase a specific item with 85% accuracy.	4a. Using the food section of the newspaper, select the appropriate coins to purchase items. 4b. Given a list of prices for various school events, select the appropriate coins to purchase tickets.	Newspaper DLM Moving Up in Money #428
5. Determine the correct coins for use for different types of coin operated machines with 100% accuracy.	5a. Shown pictures of different types of coin operated machines, select the correct coins for use in each machine. 5b. State the amount necessary to purchase specific items for the class using a vending machine that does not give change.	Money Dominoes DLM Moving Up in Money #428

INSTRUCTIONAL SUB AREA: II. Money

INSTRUCTIONAL OBJECTIVE: B. The student will select currency combinations which equal one hundred dollars.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify five, ten, twenty, and fifty dollar bills with 100% accuracy.	The student will: 1a. When shown the dollar amount, circle the correct bill. 1b. Match a drawing of currency without the picture of the president with the correct president.	DLM Moving Up in Money #428 Arithmetic Step by Step, Kit B, Unit VIII, Level II
2. Match equivalent values of currency with 100% accuracy.	2a. Shown a picture of equivalent values of currency, replicate the values using paper money. 2b. Given a value, draw currency representing several ways of equaling the value.	Arithmetic Step by Step, Kit B, Unit VIII, Level II
3. Complete a set of currency for a given value given a partial set with 95% accuracy.	3a. Verbally state the amount of money needed to complete the set. 3b. List the amounts of currency needed to complete a set.	Money Dominoes DLM Moving Up in Money #428
4. Select currency which equals a given value with 85% accuracy.	4a. Select coins equal to a value dictated by the teacher. 4b. Select coins of equal value on a language master card.	Arithmetic Step by Step, Kit B, Unit VIII, Level III

INSTRUCTIONAL SUB AREA: II. Money

INSTRUCTIONAL OBJECTIVE: *C. The student will select the appropriate amount of money to purchase a specific item.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Determine the change from ten dollars ($10) when purchasing a specific item whose value is less than ten dollars ($10) with 90% accuracy.	The student will: 1a. Using classroom objects labeled with price tags, select an item whose value is less than ten dollars, purchase the item using a ten-dollar bill from a peer acting as cashier, and count the change aloud to check for correctness. 1b. State how many hamburgers could be purchased for a specific number of classmates for ten dollars and have change remaining given the cost of one hamburger.	Paper coins and currency
2. Determine the postal service charges on mailing letters, mailing a given size package, and on a money order with 90% accuracy.	2a. Practice reading postal service letter charts and money order cost charts. 2b. Weigh a letter in class using a postage scale and use a postage chart to determine the cost if the letter was sent at different rates. 2c. Given the cost of money orders with various values, make a money order and use paper money to purchase it.	Postal and money order rate charts Postal scale

Performance Objectives	Activities	Materials/Resources
3. Compare the cost of transportation to a given location via a cab and a bus with 85% accuracy.	3a. Find out the cost of riding a bus, and the per mile rate of a cab. 3b. Using locations that he/she visits frequently, calculate the differences in bus and cab fares.	Bus and cab fare rate charts
4. Determine the cost of a meal in a restaurant given a specific menu with 90% accuracy.	4a. Design a menu and determine the cost of lunch. 4b. Determine the total cost of items circled on a menu. 4c. Given general menus, find the least expensive meal containing the same type of food.	Restaurant menus SIM, Revised (Purple), p. 30

INSTRUCTIONAL SUB AREA: III. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: A. The student will identify the given properties of line segments.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Define a straight line segment with 90% accuracy.	The student will: 1a. Give an oral definition of a straight line segment. 1b. Draw a straight line segment on the chalkboard. 1c. Use a city map to find examples of straight line segments.	 HISD Film #3484, Introducing Shapes, Lines, and Angles SIM (Yellow), pp. 85-86 City map
2. Designate curved, horizontal, vertical, parallel, and perpendicular line segments with 80% accuracy.	2a. Draw each line segment when given a visual clue. 2b. Draw each line segment when given an aural clue. 2c. Given a picture of each line segment, circle the line segment stated by the teacher. 2d. Draw the line segment dictated by a peer. 2e. Name objects in the classroom that represent each type of line segment.	SIM, Revised (Purple), pp. 92-94 SIM (Yellow), p. 86

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INSTRUCTIONAL SUB AREA: III. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: B. The student will identify and draw angles.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Define and draw a ray with 80% accuracy.	1a. Illustrate a ray on the chalkboard.	SIM, Revised (Purple), p. 94
	1b. Give an oral definition of a ray.	SIM (Yellow), p. 27
	1c. Use clay and toothpicks to illustrate a ray.	Clay, toothpicks
2. Define and draw an angle with 85% accuracy.	2a. Explain the relationship between rays and angles.	SIM, Revised (Purple), pp. 94-95
	2b. State whether or not pairs of rays form angles.	SIM (Yellow), p. 271
	2c. Identify examples of angles in the classroom.	Primary Number and Geometry Board
	2d. Use rulers to illustrate angles.	Rulers
	2e. Use students lying on the floor to illustrate angles.	Kinesthetic Shapes Discovery Boards
	2f. Draw angles on the chalkboard.	SIM, Revised (Purple), p. 99
3. Define and identify a right angle with 85% accuracy.	3a. Give an oral definition of a right angle.	SIM, Revised (Purple), pp. 94, 97
	3b. Point to examples of right angles in the classroom.	SIM (Yellow), p. 272

Performance Objectives	Activities	Materials/Resources
	3c. State examples of right angles found in the home. 3d. Given pictures of various angles, circle the right angles. 3e. Shown pictures of various ang' s, raise his/her right hand to indicate a right angle.	Primary Number and Geometry Board

INSTRUCTIONAL SUB AREA: III. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: *C. The student will determine the temperature using Fahrenheit and Celsius thermometers.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Designate the freezing and boiling points on a Fahrenheit and Celsius thermometer with 100% accuracy.	The student will: 1a. Given a picture of a Fahrenheit and Celsius thermometer with arrows pointing to the freezing and boiling point on each thermometer, read the temperature. 1b. Use arrows to indicate the boiling and freezing point on a Fahrenheit and Celsius thermometer. 1c. Draw a picture of a Fahrenheit and Celsius thermometer and color the mercury to indicate the freezing and boiling points on each thermometer.	SIM (Yellow), p. 221
2. Read the temperatures on different types of thermometers used in various situations (e.g., room temperature, cooking) with 90% accuracy.	2a. Read the temperature on the thermometer after taking a peer's temperature. 2b. Using a room thermometer, record the temperature in the classroom for a week on a graph. 2c. Using a candy thermometer, measure the temperature of a bowl of warm water and a bowl of ice water.	Fahrenheit and Celsius thermometers A General Mathematics Review, #513 (Area and Measurement)

INSTRUCTIONAL SUB AREA: III. Geometry/Measurement

INSTRUCTIONAL OBJECTIVE: D. The student will obtain information from picture graphs, line graphs, circle graphs, and bar graphs.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify the number of objects in a category using picture, line, circle, and bar graphs with 80% accuracy.	The student will: 1a. Shown each type of graph, name the components. 1b. State the similarities and differences between each type of graph. 1c. Analyze information on graphs found in magazines and newspapers.	HISD Film #7138, Introducing Graphs SIM (Yellow), pp. 237-245 Develop Number Skills, pp. 119-124
2. Solve word problems using graphs with 80% accuracy. 107	2a. Given a series of graphs and a word problem, match the appropriate graph(s) to the word problem. 2b. Solve word problems formulated by the teacher.	HISD Film #3644, Graphs: Understanding and Using Them SIM (Yellow), pp. 237-246 Tops Problem Deck C
3. Create line, circle, and bar graphs using a minimum of five categories with 85% accuracy.	3a. Give the basic data, create each type of graph. 3b. Create each type of graph using concrete objects.	SIM, Revised (Purple), pp. 297-303 Working With Numbers, pp. 96-98 Arithmetic Step by Step, Kit B, Unit X, Level I

SECOND SEMESTER

INSTRUCTIONAL SUB AREA: IV. Fractions

INSTRUCTIONAL OBJECTIVE: *A. The student will add and subtract fractions with different denominators.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Determine the least common denominator of two or more fractions with 95% accuracy.	The student will: 1a. Define numerator, denominator, and least common denominator. 1b. Given pairs of fractions, underline the pairs that are like fractions. 1c. Given pairs of fractions, draw a circle around the portion of fraction used in determining the least common denominator and state the basic operation that is necessary. 1d. Using whole numbers written on cards, select cards at random from fractions, find the least common denominator of two or more of the fractions.	HISD Film #3612, Finding the Common Denominator HISD Film #6402, Factoring Numbers, 11 min. SIM, Revised (Purple), pp. 167-171 A General Mathematics Review, #513 (Decimals and Fractions)
2. Add fractions with different denominators with 90% accuracy.	2a. Define prime factor. 2b. Given a list of even numbers, determine their prime factors. 2c. Determine the least common denominator of pairs of fractions. 2d. Add the fractions used in activity 2c.	SIM (Yellow) pp. 183-184 SIM, Revised (Purple), pp. 185-187 IM BB Block 19 Computapes, Module 5, FR 15

Performance Objectives	Activities	Materials/Resources
3. Subtract fractions with different denominators with 90% accuracy.	3a. Given pairs of unlike fractions, determine the least common denominator. 3b. Rewrite fractions as equivalent fractions. 3c. Subtract fractions dictated by a peer.	SIM (Yellow), pp. 185-187 SIM, Revised (Purple), pp. 186-187 Fraction Mastery Program (Language Master cards 278-281)

INSTRUCTIONAL SUB AREA: IV. Fractions

INSTRUCTIONAL OBJECTIVE: B. The student will add and subtract mixed numbers.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Designate proper and improper fractions with 100% accuracy.	1a. Define proper and improper fractions.	SIM (Yellow), pp. 118, 122
	1b. When fractions are dictated, sit to indicate proper fractions and stand to indicate improper fractions.	
	1c. Given a list of proper and improper fractions, draw a square around the proper fractions and a triangle around the improper fractions.	
	1d. Draw pictures illustrating proper and improper fractions.	
2. Convert improper fractions to mixed numbers with 90% accuracy.	2a. Define mixed number	SIM (Yellow), p. 118
	2b. Draw a fractional number line to illustrate the conversion of improper fractions to mixed numbers.	SIM, Revised (Purple), pp. 160-161
	2c. Write the numerator and denominator of an improper fraction in the proper location, given an incomplete division problem.	Computapes, Module 5, FR 8
	2d. Given an improper fraction written on a flashcard, write the equivalent mixed number on the reverse side.	

Performance Objectives	Activities	Materials/Resources
3. Convert mixed numbers to improper fractions with 90% accuracy.	3a. Use fractional parts of a whole to illustrate the conversion of mixed numbers to improper fractions. 3b. Given a list of mixed numbers and a list of improper fractions, draw lines to match the two. 3c. Given the basic operations needed to convert a mixed number to an improper fraction, state how and where these operations would be applied. 3d. Given mixed numbers written on flashcards, write the equivalent improper fraction on the reverse side.	SIM (Yellow), p. 189 SIM, Revised (Purple), pp. 162-163 Computapes, Module 5, FR 10
4. Add and subtract mixed numbers with like denominators with 90% accuracy.	4a. State the similarities between adding and subtracting whole numbers, fractions, and mixed numbers. 4b. Given addition and subtraction problems with partial answers, complete the answers. 4c. Write the missing whole number, numerator, denominator, and/or entire fraction in addition and subtraction problems involving mixed numbers. 4d. Add and subtract mixed numbers dictated by a peer.	SIM (Yellow), pp. 190-192, 195 SIM, Revised (Purple), pp. 180-181, 196-197 Computapes, Module 5, FR 11, 12

Performance Objectives	Activities	Materials/Resources
5. Add and subtract mixed numbers with different denominators with 80% accuracy.	5a. Play "Fraction Bingo" by solving addition and subtraction problems involving mixed numbers and circling the answers on the Bingo card. 5b. Given a newspaper, circle 20 mixed numbers to use in addition and subtraction problems.	Fraction Bingo cards SIM (Yellow), pp. 193-194, 196 SIM, Revised (Purple), pp. 188-191, 196-197 Computapes, Module 5, FR 16

INSTRUCTIONAL SUB AREA: IV. Fractions

INSTRUCTIONAL OBJECTIVE: C. The student will multiply fractions.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Multiply a fraction by a fraction with 95% accuracy.	The student will: 1a. Using graph paper to make a fractional chart and pencils of various colors, color portions of the chart to illustrate multiplication of fractions. 1b. Select two fractions at random from a box of fractions and multiply.	HISD Film #2629, Multiplication of Fractional Numbers, 30 min. SIM (Yellow), pp. 291-292, 314 SIM, Revised (Purple), pp. 200-205 Computapes, Moduel 5, FR 18
2. Multiply a whole number by a fraction with 80% accuracy.	2a. Given a list of whole numbers, rewrite as fractions. 2b. Given a completed multiplication problem, write the missing fraction. 2c. Given a fraction dictated by a peer, multiply it by a number selected by spinning a wheel.	SIM (Yellow), pp. 293-294, 298, 314 SIM, Revised (Purple), pp. 198, 206-207, 217 Computapes, Moduel 5, FR 17
3. Multiply a whole number by a mixed number with 80% accuracy.	3a. Using a magnetic board and numbers, demonstrate the steps in multiplying a whole number by a mixed number.	Magnetic board and numbers IM CC, Block 19

Performance Objectives	Activities	Materials/Resources
	3b. Given a list of whole numbers and a list of mixed numbers, multiply the numbers connected by arrows. e.g.	Computapes, Moduel 5, FR 20 SIM, Revised (Purple), pp. 212, 217
4. Multiply a mixed number by a fraction with 80% accuracy.	4a. Demonstrate multiplying a mixed number by a fraction using an overhead projector. 4b. Multiply numbers recorded on language master cards.	Overhead projector Language master cards SIM, Revised (Purple), pp. 210, 215-216
5. Multiply a mixed number by a mixed number with 80% accuracy.	5a. Multiply mixed numbers found in his/her favorite recipe. 5b. Multiply mixed numbers found in the directions for building an object.	SIM, Revised (Purple), p. 215 Computapes, Module 5, FR 21

INSTRUCTIONAL SUB AREA: IV. Fractions

INSTRUCTIONAL OBJECTIVE: D. The student will divide fractions.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Identify the reciprocal of a number with 85% accuracy.	The student will: 1a. Define the term reciprocal. 1b. Say the reciprocal of numbers when shown flashcards. 1c. Color the space containing the reciprocal of given numbers to form a pattern. 1d. Given a list of numbers, write the reciprocal on the chalkboard.	SIM, Revised (Purple), pp. 200-222, 237 Computapes, Module, FR 23
2. Divide a fraction by a whole number with 80% accuracy.	2a. Rewrite a list of whole numbers as fractional numbers. 2b. Rewrite a series of problems involving the division of a fraction by a whole number in the appropreate form. 2c. Demonstrate the reciprocal method of dividing a fraction by a whole number at the chalkboard using letters instead of numbers. 2d. Change an improper fraction into a mixed number and use the whole number and fraction as the divisor and dividend in a division problem.	SIM, Revised (Purple), pp. 224-225, 237

Performance Objectives	Activities	Materials/Resources
3. Divide a whole number by a fraction with 80% accuracy.	3a. Demonstrate dividing a whole number by a fraction using the overhead projector. 3b. Divide his/her age, weight, and height in inches, by a given series of fractions. 3c. Divide the number of students in each of his/her classes by a given series of fractions.	Overhead projector SIM, Revised (Purple), pp. 224-225, 237
4. Divide a fraction by a fraction with 80% accuracy.	4a. Using shapes made from various colors of construction paper, demonstrate the reciprocal of a fraction. 4b. Complete tables which involve dividing a fraction by a fraction.	HISD Film #2630, Division of Fractional Numbers, 30 min. Construction paper SIM, Revised (Purple), pp. 223, 237 Computapes, Module 5, FR 24

INSTRUCTIONAL SUB AREA: V. Decimals

INSTRUCTIONAL OBJECTIVE: *A. The student will add decimals.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Identify decimal numerals to the thousandth place with 100% accuracy.	1a. Define decimal and decimal point.	HISD Film #8080, Introducing Decimals
	1b. Explain the function of a decimal point by circling the larger part and underlining the smaller part of a number.	HISD Film #8081, Decimal Operations and Uses
	1c. Demonstrate the meaning of a decimal number using currency and coins.	Paper coins and currency
	1d. Using a decimal place value chart with pocket that the student has constructed, numbers written on construction paper, and a list of decimal numbers, place the numerals in the correct pocket on the chart.	Construction paper and tape SIM (Yellow), pp. 209-210 SIM, Revised (Purple), pp. 124-127
	1e. Make a set of flashcards containing five cards each illustrating decimal numerals to the thousandth place.	
	1f. Convert fractions to their decimal equivalent.	
2. Add decimal numbers having the same number of decimal places with 95% accuracy.	2a. Given a four-digit number, rewrite the number as decimals to the thousandths place.	SIM, Revised (Purple), pp. 138, 156, 238-239
	2b. Rewrite four-digit numbers as decimals with place values to the thousandths place, select numbers with the same place value designation and add.	SIM (Yellow), pp. 225-230 IM CC, Block 16

Performance Objectives	Activities	Materials/Resources
	2c. Given the cost of several items, write the total, then remove the dollar sign, and say the number as a decimal. 2d. Convert fractions to decimals and add.	
3. Add decimal numbers with a different number of decimal places with 90% accuracy.	3a. Given pairs of decimal numbers with a different number of decimal places written in vertical from, write zeros as place holders. 3b. Given two, three, or four whole numbers, place a decimal point as directed by the teacher, and add the numbers. 3c. Given two, three, or four numbers written in horizontal form, rewrite the numbers in vertical form and add. 3d. Given subtraction problems, solve without using zeros as place holders.	SIM (Yellow), pp. 230, 235-236 SIM, Revised (Purple), pp. 242-243, 247 Arithmetic Step by Step, Kit B, Unit X, Level II

INSTRUCTIONAL SUB AREA: V. Decimals

INSTRUCTIONAL OBJECTIVE: B. The student will subtract decimals.

Performance Objectives	Activities	Materials/Resources
The student will:	The student will:	
1. Subtract decimal numbers having the same number of decimal places with 95% accuracy.	1a. Solve word problems involving the subtraction of money. 1b. Convert the same two whole numbers to decimal numbers to the thousandths place, and subtract the numbers that have the same number of decimal places. 1c. Change two fractions to decimals and subtract.	SIM (Yellow), pp. 227-228, 231 SIM, Revised (Purple), pp. 140-141
2. Subtract decimal numbers with a different number of decimal places with 90% accuracy.	2a. Given two numbers with a different number of decimal places, add zeros as place holders, and subtract. 2b. Write two decimal numbers with a specific number of decimal places dictated by a peer, add zeros as place holders, and subtract. 2c. Rewrite subtraction problems written in a horizontal form to a vertical form, add zeros as place holders, and subtract. 2d. Fold a piece of paper into twelve squares, place the letters from A to P in each square, write a number in each square as dictated by the teacher, place decimal points as indicated by the teacher, subtract the numbers, and write the answer.	SIM (Yellow), pp. 232, 236 SIM, Revised (Purple), pp. 238, 242-243 Arithmetic Step by Step, Kit B, Unit X, Level II

Performance Objectives	Activities	Materials/Resources
	2e. Given subtraction problems, solve without using zeros as place holders.	

INSTRUCTIONAL SUB AREA: V. Decimals

INSTRUCTIONAL OBJECTIVE: C. The student will multiply decimals.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Multiply a decimal by a whole number with 95% accuracy.	The student will: 1a. Discuss the similarities and differences between multiplying whole numbers by whole numbers and a decimal by a whole number. 1b. Given completed multiplication problems in which a decimal is multiplied by a whole number, explain the relationship between the placement of the decimal point in the multiplicand and in the answer. 1c. Given the cost of a plate lunch in the cafeteria, find the cost of buying the lunch for one, two, three, and four weeks. 1d. Use a piece of yarn attached to the decimal point in the multiplicand as an aid in locating the correct place of the decimal point in the answer.	SIM, Revised (Purple), pp. 144-145, 244-247 Arithmetic Step by Step, Kit B, Unit X, Level II Computapes, Module 6, DP 6
2. Multiply two decimals with 80% accuracy.	2a. Given a list of decimals, multiply each decimal by ten, one hundred, and one thousand, and state the number of places the decimal point moved in each example.	SIM, Revised (Purple), pp. 145-147, 244-247 Computapes, Module 6, DP 7 Arithmetic Step by Step, Kit B, Unit X, Level II

Performance Objectives	Activities	Materials/Resources
	2b. Given a list of decimal numbers and an identical list without the decimal points written on the chalkboard, draw a square, triangle, and circle to indicate the correct placement of decimal point then the numbers are multiplied by ten, one hundred, and one thousand respectively. 2c. Given two decimal numbers, write the total number of decimal places on a chart. 2d. Given completed multiplication problems, write the decimal point in the correct position. 2e. Multiply two decimal numbers written from dictation.	

INSTRUCTIONAL SUB AREA: V. Decimals

INSTRUCTIONAL OBJECTIVE: D. The student will divide decimals.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Divide a decimal by a whole number with 85% accuracy.	The student will: 1a. Explain the similarities and differences between dividing whole numbers and dividing a decimal by a whole number. 1b. Given completed division problems, place the decimal point in the proper position. 1c. Divide a decimal by a whole number using decimal number cards selected at random.	SIM, Revised (Purple), pp. 150-151, 248, 250 Computapes, Module 6, DP 9
2. Divide a decimal by a decimal with 80% accuracy.	2a. Convert a list of decimal numbers to whole numbers. 2b. Given a list of decimal numbers, move the decimal point a specified number of places. 2c. Given two decimal numbers, move the decimal point in the second number on equivalent number of spaces it took to make the first a whole number. 2d. Find the quotient of decimal problems written on language master cards.	SIM, Revised (Purple), pp. 152-153, 156, 248-253 Computapes, Module 6, DP 10

INSTRUCTIONAL SUB AREA: VI. Practical Applications

INSTRUCTIONAL OBJECTIVE: *A. The student will solve word problems involving two operations requiring addition, subtraction, multiplication, or division.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Solve word problems involving two steps using the same operation with 90% accuracy.	The student will: 1a. Given a completed word problem written on the chalkboard, state and analyze the steps in solving the problem. 1b. Given a math sentence, develop a word problem.	Tops Problem Deck C SIM (Yellow), pp. 72-73 SIM, Revised (Purple), p. 31
2. Solve word problems involving two different operations with 90% accuracy.	2a. Given a list of math sentences and a list of word problems, match the math sentence with the correct word problem. 2b. Given a word problem, select the information necessary to solve the problem and underline in red. 2c. Participate in a relay race to solve word problems written on the chalkboard.	SIM (Yellow), pp. 139-140 SIM, Revised (Purple), pp. 31, 46 Tops Problem Deck C

INSTRUCTIONAL SUB AREA: VI. Practical Applications

INSTRUCTIONAL OBJECTIVE: B. The student will solve word problems involving measurement, time, and money concepts.

Performance Objectives	Activities	Materials/Resources
The student will: 1. Solve word problems involving units of measure with 80% accuracy.	The student will: 1a. Given specific facts involving units of measure, develop and solve a word problem. 1b. Given a word problem involving units of measure, substitute different numbers in the problem, and solve.	Tops Problem Deck D SIM (Yellow), pp. 238-246 SIM, Revised (Purple), pp. 148-149
2. Solve word problems involving operations with money including budgeting with 80% accuracy.	2a. Solve a word problem involving purchasing food for Thanksgiving dinner given a specific amount of money. 2b. Compute the sales tax on items found in a catalog. 2c. Given an amount of money as an allowance, develop a weekly and monthly budget. 2d. Use budgets to develop and solve word problems.	Tops Problem Deck C SIM (Yellow), p. 253
3. Solve word problems involving units of time including scheduling with 80% accuracy.	3a. Compute the time necessary to complete several activities within a given time period. 3b. Prepare daily, weekly, and monthly schedules; develop and solve word problems using the schedules.	Tops Problem Deck D SIM (Yellow), p. 300

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